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Contributions to the Editor: Arthur Wright F.P.S., D.B.A. · 36 York Place · Edinburgh · EH1 3HU

SPRING CONFERENCE

Following the usual pattern, the Society's Spring Conference held at Bristol University, April 6-8, included a wide variety of topics. The first visit on Friday night was to the cellars of John Harvey & Sons Ltd. where members touring the museum, saw collections of wine glasses and silver wine labels and a film dealing with the production of sherry. Mr J. W. H. Cummings discussed various sherries and their characteristics and members were able to sample three types.

"The decline of the apothecary in Bristol" was the title of the first paper given by Mr F. H. Rawlings. It was an eye-witness account by Robert Smith Junior, a surgeon at Bristol Infirmary, 1796-1843, contained in the Memoirs of the Infirmary comprising fourteen large leather bound volumes of manuscripts, cuttings and biographies of persons connected with the Infirmary during 1735-1842.

Thomas Holloway was again the subject of a paper presented at the conference, this time Miss J. Chapel, art historian dealt with Thomas Holloway as a Victorian Patron.

Appropriately there was a paper reviewing Pharmaceutical Education in the West of England—Bath and Bristol Schools of Pharmacy—Personalities and Places 1907-1979. It was given by Professor D. A. Norton, University of Bath. Before giving his paper, Professor Norton presented to Miss A. Hutton, president of the Society, a copy of a book "Notes on the Apothecaries of Bath" by Warren Derry.

Professor P. F. Holt's paper "The Salamander and Salamander Wool" traced earlier ideas on the habits of Salamanders, he also mentioned the additional meaning adopted during the Middle Ages when the word salamander referred to the mineral asbestos.

In a final paper Mrs M. H. Phillips discussed "Some Quaker Apothecaries", tracing the connections between Joseph Fry, William Cookworthy, Sylvanus Bevan and Benjamin Balkwill.

HISTORY OF PHARMACY EXHIBITION

During the conference the possibility of holding a History of Pharmacy Exhibition at the Corinium Museum, Cirencester during the summer of 1980 was discussed. Details of the proposal were give by Mr. Elliott, Cirencester, David Viner, Curator, Corinium Museum and Dr W. R. L. Brown, chairman, Cheltenham Branch, Pharmaceutical Society. An appeal was made for information concerning old pharmacy fittings which might be available for the exhibition, sources of finance and individual exhibits.

OFFICERS

During the annual general meeting of the society, Miss D. A. Hutton and Messrs G. C. Bloomfield, A. G. M. Madge and Dr T. D. Whittet were re-elected to the committee. Mr D. C. Harrod and Mr G. R. A. Short were re-elected auditors.

A DATE FOR THE DIARY

The Society's Spring Conference in 1980 is to be held in Bradford, March 28-30.

Professor D. A. Norton presenting to Miss D. A. Hutton, president, a copy of "Notes on The Apothecaries of Bath" by W. Derry.

Relaxing during the coffee break (left to right) Professor P. F. Holt, Mrs M. H. Phillips and the president.

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John Houghton (1645-1705) Journalist, apothecary and F.R.S.

by D. T. O'ROURKE

According to the records of the Society of Apothecaries, confirmed by the Cheshunt baptismal register and by a later marriage licence, John Haughton was born in 1645 at Waltham Cross on the Hertfordshire-Middlesex border. That spelling of his name indicates the pronunciation, though he spelled it differently in later life. He was the son of an imbrotherer (embroiderer), Roger Haughton, who died when John was aged ten. This luxury trade in a rural village is explained by the presence of a neighbouring royal residence, Theobalds.

John's apprenticeship as an apothecary spanned the Plague of 1665, especially significant for him as he recalls in 1682:

> "I must confess, that was a sad time, especially for the City of London, and few of my years were more sensible of it than I. For I was then an apprentice with Mr Upton, that is Master of the Pest house, and upon that score had more opportunity to hear complaints, and see miseries, than most other folk had. For although my master, and some other that related to the sick and the dead, had very great trades; yet London was so thin that I saw before Draper's Hall behind the Exchange, grass growing of a considerable length."

The City pest-house was in Finsbury Fields. Nathaniel Upton was revered for his work during the 1665 plague, and is included by Defoe among the Doctors. He was an apothecary, not a physician. He might well have deserved a "Lambeth M.D." as was awarded to Francis Bernard, apothecary to St Bartholomew's Hospital; but Upton was probably a nonconformist, and ineligible for a Church award.

Houghton's first published work was an anonymous pamphlet called *England's Great Happiness.* This was printed in 1677, eight years after he had finished his apprenticeship. In this pamphlet, as in his later publications, he appears as a free-trader, as an advocate of growth in the economy and in the population. In 1845 the economist J. R. McCulloch, though not knowing who was the author of the pamphlet, said "he was very far in advance of the prejudices of his time" but that his "influence was too feeble to arrest the current of popular prejudice". Houghton's writings probably had no political effect, but it may have been this first pamphlet that got him noticed by Robert Hooke, who proposed him as F.R.S. in January 1679/80.

Houghton was active in the Royal Society, not merely in attending meetings and paying subscriptions. He proposed several people for election, including William Penn; he was one of the six auditors for many years; he helped to collect arrears of subscriptions. Who better as a debt-collector than a tradesman who can write about a profit margin of 16% that "we apothecaries get at least (when we are paid) half as much more". He acquired many specimens for the Society's museum and was listed as a donor in Nehemiah Grew's *Museum Regalis Societatis* (1681), a copy of which he later presented to the Society of Apothecaries.

From 1681 Houghton published and partly wrote *A Collection of Letters for the Improvement of Husbandry and Trade,* with contributions from Robert Plot, John Evelyn, John Flamsteed and others, including two women. This may have been the only practical outcome of the Royal Society's revived Georgical (Agricultural) Committee, of which Houghton was a member. This periodical could be said to have aimed at monthly publication, but Houghton's only promise was that there should be "every twenty-four sheets a volume". There was a hiatus after the issue of January 1683/4, but he fulfilled his promise by completing the volume in 1685 though the final issue was still dated 1683.

In 1691 Houghton issued a prospectus for a new publication, with a testimonial from the President and 27 Fellows of the Royal Society. *A Collection, for Improvement of Husbandry and Trade* was published from March to June 1692 but ran into financial trouble. This overcome, it resumed in January 1693 and ran regularly and weekly until September 1703, It earned Houghton the title of "the father of English advertising" but its success seemed assured before advertisements played any great part. The ingredients which remained constant throughout the eleven years were two-fold: an editorial by Houghton and a list of prices.

The editorials are wide-ranging, from brick-making to varnish, from birds to wheat. Market prices of corn and other produce are given weekly for about fifty provincial markets. "Actions in Companies" are regularly quoted; his readers need an explanation, so Houghton gives them, and us, the earliest printed account of the stock exchange.

The advertisements began gradually and increased in number and variety. Houghton became a commission agent for employment and property and even, apologetically, for marriages. An earlier apology had prefaced his first advertisements for patent medicines but it was his reputation as an advertiser he was protecting. There is no suggestion that he saw these medicines, generally sold by booksellers, as in competition with his practice.

Most of Houghton's writings on agriculture and industry are derivative, though from the best contemporary authorities. Sometimes he quotes a book or article verbatim, always careful to acknowledge the source. Sometimes he prints a letter which he has received or solicited. Sometimes he refers to accepted opinion, simplifying and popularising the Royal Society's discussions. His writings on economic and trade policy reflect his own views, maybe sound but out of tune with his times.

Nevertheless when he could not accept received opinion he experimented in true Royal Society fashion. It was generally held that nitre from the air was transmitted to plants by rain and more so by hail or snow. So he evaporated snow and tried the residue in the fire but there were no saltpetre sparks from his poker. Again it was held that earth or soil, after water and organic matter were, removed consisted of sand. Houghton used lixiviation and flotation to examine different earths, and distinguished clay as a mineral ingredient different from sand. Davy

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refined these methods 120 years later and that summarises experimental soil physics up to about 1870.

In September 1703, having covered fish and fowl throughout the last year, Houghton decided to end his *Collection*. He explains having "gone thro' the principal Histories of the Mineral, Vegetable and Animal Kingdoms, except Beasts, of which I have given only the History of Kine" and refers the reader to recent authors' works on horses and so on. He then writes:

> "But truly, since (beside my Trade of an Apothecary, wherein I have always been, and still am, diligent) I have fallen to the Selling of Coffee, Tea, and Chocolate in some considerable Degree, I cannot without great inconvenience to my private Affairs, which must not be neglected, spare Time to carry on this History so well as I would do."

His last words are taken from the Prophet Isaiah:

> "Thus I take leave of these Papers, wishing that Knowledge may cover the Earth as the Water covers the Sea, which is the hearty Prayer of the World's well Wisher, John Houghton, F.R.S."

That was his public reason, but perhaps he knew he had not long to live. He died some two years later. No portrait of him has been found. He was too minor for the Royal Society to have one, and in the Society of Apothecaries he played little part, a member of the Court of Assistants but never Warden or Master.

There were two particular requirements for the work he produced: a scientific education and a meeting-place for his correspondents, his advertisers and his customers. Where else could these be found but in an apothecary's shop?

Examples of Houghton's advertisements

I ſell CHOCOLATE made of the *beſt Nuts*, without *Spice* or *Perfume*, and with *Vinelloes* and *Spice* and I know them to be a great helper of bad Stomachs, and Reſtorative to weak People. I'll anſwer for their Goodneſs.

I alſo ſell true *German* SPAW-WATER, and SAGO, which I am told by one is the Pith of the Palm-Tree, and by another, it is a Gumm; it makes Gelly, and is very nouriſhing.

IF any Country Apothecary wants a Journey-Man I can help him.

I Want an Apprentice for an Apothecary of great Trade in a great Town in *Lincolnſhire*.

I have the *COMPLEAT HORSE-MAN*, or *PARFAIT MARESCHAL* by the *Sieur de Solleyſel*, tranſlated by Sir *William Hope*. I can furniſh Gentlemen with Medicines therein mentioned.

☞ Any that will, may have my *Quarto* bound Volumes, ending 1683. and theſe *Folio* Volumes ſtitcht in Blue Paper, as far as they are gone.

†††I have to ſell 3 or 4 ſorts of very good *Jeſuits-Bark*, *Flower of Brimſtone Sal Volat. Oleoſ. Sp. Sal. Armon. Cornu Cervi*, *Sal Succin.* and *Ol. Succin. Rectif.* as cheap, or cheaper than any in Town does: And I'll ſell any good Commodity for any man of Repute if deſired.

*** I have to ſell a parcel of printed Titles, fit for Pots, Glaſſes, or Boxes of all ſizes, not differing much from Gilding or Painting; and truly they are very pretty, and will be ſold at 3 *s.* the Quire, in which is above 900; and Titles for Chirurgeons Cheſts, at 2 *s.* the Quire. *Alſo* another ſort more curious, at 10 *s.* the Sett, in which are near 1000 Names of Druggs and Medicines printed, beſides ſome Blanks.

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Pharmacy in Revolutionary and Napoleonic Paris, 1789-1815

by W. A. SMEATON*

When the Bastille was stormed in 1798 there were about 130 pharmacists in Paris, and the number increased only slightly by the time of Waterloo. There were few changes in the drugs they dispensed, but the way in which the profession was organised and controlled had altered; a new educational system had been established; a learned society devoted to pharmacy and a pharmaceutical journal had been founded. These changes did not occur overnight or without difficulty.

In 1789 all Paris pharmacists had to belong to the *Collège de Pharmacie,* to which they were admitted after an apprenticeship of eight years followed by an examination. Apprentices learnt practical pharmacy from their masters and also attended courses in chemistry, botany and natural history. Since 1780 the College had been legally obliged to give these courses at the Rue de l'Arbalète, in the south-east quarter of Paris, where it owned a house, with a laboratory and botanical garden, bequeathed to it by Nicolas Houin in 1576. The professors in 1789 were: for chemistry, N. Deyeux, who later became professor at the Faculty of Medicine; for botany L. J. Guiart, a pharmacist in the Rue St. Honoré; and for natural history, J. F. Demachy, who had a distinguished career as a hospital pharmacist. The College was administered and its examinations organised by three elected provosts, the chief of whom was J. N. Trusson, owner of a pharmacy near the church of St. Geneviève (now the Panthéon).

During the first two years of the Revolution life in Paris changed little. Louis XVI remained on the throne and most people were hoping for a stable constitutional monarchy on the British pattern. The National Assembly did, however, abolish many of the rights and privileges of the King, the aristocracy and the ancient corporations, and in an excess of democratic zeal it decreed in 1791 that any citizen was free to practice any profession. The law was soon repealed but many unqualified men set themselves up as pharmacists. Some received licences from the civic authorities in Paris, and protests from the College had little effect.

The Revolution did not remain peaceful. In April 1792 the National Assembly began a disastrous war against Austria. Louis XVI was dethroned in September and executed in January 1793. Britain and Spain soon declared war against the French Republic where, under Robespierre, a war cabinet called the Committee of Public Safety raised new armies and saved the military situation but persecuted individuals and institutions associated with the old regime. Almost alone among the educational establishments in Paris the school at the Rue de l'Arbalète continued to function, partly because the pharmacists had a friend in high office. This was A. F. Fourcroy, a distinguished chemist who entered the Convention—the successor to the National Assembly—in July 1793.

*Dept. of History and Philosophy of Science, University College, London

After graduating as a physician in 1780 Fourcroy did not practise, but began a successful career as a chemistry lecturer, writer and researcher. He published books on chemistry and materia medica, and in 1791-92 he edited a short-lived journal, *La Médecine Éclairée par les Sciences Physiques,* which was concerned with the applications of science to medicine and pharmacy. He was aided by an editorial committee of physicians, surgeons and pharmacists, and he claimed that members of the three professions had never before collaborated so closely.

Soon after entering the Convention Fourcroy was appointed to its Education Committee and in November 1794 he recommended the preservation of the pharmacists' school in a report to the Convention outlining proposals for a new educational system. State medical schools were to be set up in Paris and elsewhere, but he saw no reason to interfere with the independent school of pharmacy. When the provosts of the College visited Fourcroy to thank him, he indicated that the government was considering a complete reform of the laws concerning pharmacy, and asked for a report on the College, which might have to be reorganised. He also advised the provosts to exercise their existing legal powers and insist that non-qualified pharmacists in Paris became members of the College by passing the necessary examination. Letters were sent to all such men, and one who applied for membership was N. L. Vauquelin, Fourcroy's collaborator in chemical research and already a well-known scientist. He had been apprenticed at one time to Fourcroy's cousin, J. P. R. Cheradame, and had attended courses at the College. He successfully submitted to an oral examination in April 1795— a most unusual candidate, for he was a government inspector of mines as well as assistant professor at the *École Polytechnique.*

The projected reform of the College did not occur, for it was succeeded by another organisation. In 1795 France acquired a new constitution, which gave any group of citizens the right to form a *Société Libre*—a free or independent society. The Paris pharmacists took advantage of this and in March 1796 they founded the *Société Libre des Pharmaciens de Paris.* Trusson was the first director with Cheradame as his assistant, and as secretary they appointed E. J. B. Bouillon-Lagrange, a young man who directed the chemical laboratories of the École Polytechnique for several years and later became pharmacist to Napoleon's household. Every Paris pharmacist was automatically a full member of the new society, which also decided to elect as associate members twenty distinguished scientists who were not pharmacists. Among them was Fourcroy, who was later made a full member, the only non-pharmacist so honoured. There were also corresponding members, some of whom lived abroad. During the short Peace of Amiens in 1802-3 the young British chemist Humphry Davy was elected, but, as we shall see, the Society was then near the end of its life, and he may not even have been aware of the honour, which was probably the first of many that he received.

When formally admitted in January 1797, Fourcroy made a speech in which he drew attention to the need in France for a journal in which pharmacists could publish original observations and research, and the Society accordingly founded the *Journal de la Société des Pharmaciens de Paris.* In the same year a course of practical pharmacy was added to those of chemistry, botany and natural history, and it was decided to prepare chemicals and medicaments during the lecture

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demonstrations in pharmacy and chemistry, sell them to physicians and finance the courses and the journal from the proceeds. Fourcroy, with a small board to assist him, became editor of the journal, which appeared fortnightly from June to September 1797 and monthly thereafter. After a year, it was losing money and could no longer be subsidised by the Society, but Fourcroy had confidence in it and personally assumed financial responsibility. His confidence was, however, unjustified, for few members contributed articles and the circulation remained low. In June 1799 the title was changed to *Journal de Pharmacie*, probably in an attempt to make it appeal to contributors and subscribers outside Paris, but it ceased publication six months later and was amalgamated with the well established chemical journal, *Annales de Chimie.* A reference to pharmacy was added to the title of *Annales,* but it published a few articles on pharmacy after 1802. This first attempt to found a pharmaceutical journal had failed.

The Society remained responsible for teaching and examining and for the maintenance of professional standards of conduct, but only until 1802. The educational reforms of 1794 had not all been implemented during the turbulent years of revolution and war, and a completely new national system was devised by the more stable government of Napoleon. Its chief architect was Fourcroy, now Director-General of Public Instruction, who proposed the formation of new schools of pharmacy at Montpellier and Strasbourg and the absorption of the Paris school into the state system. Students of pharmacy were to have their period of apprenticeship reduced to three years, following three years at one of the schools, and such a long course could no longer be privately financed. Vauquelin became director at the Rue de l'Arbalète, and most of the professors were retained, but the Society was not involved. At the same time the inspection of pharmacies became the joint responsibility of the schools of pharmacy and medicine.

A new *Société de Pharmacie de Paris* was founded in 1803, as a learned society without teaching or professional activities. Its rules provided for the publication of memoirs, but this was not done, probably because its members—all of them active in the old Society—remembered the failure of their journal. Pharmacists were, however, doing research and finding difficulty in publishing their results, so in 1808 six members of the Society, headed by A. A. Parmentier and C. L. Cadet, founded a private company which published a monthly *Bulletin de Pharmacie.* It attracted subscribers and contributors from all over France and proved to be a success. In 1815 its title was changed to *Journal de Pharmacie et des Sciences Accessoires,* but it remained privately owned until 1834, when it became the official organ of the Society, which was the precursor of the present *Académie de Pharmacie.*

Notes:

1. This paper is based in part on a longer and fully documented article by Susan Court and W. A. Smeaton, 'Fourcroy and the *Journal de la Société des Pharmaciens de Paris*', in *Ambix.* vol. 26, no. 1 (March 1979, in the press).
2. This summary is of the talk given by Dr Smeaton to the Society on November 16, 1978.

Pharmacies as General Stores in the 19th Century

by J. K. CRELLIN

The growing enthusiasm to re-examine certain aspects of the history of medicine and pharmacy through "local history" is reflected in many issues of the *Pharmaceutical Historian.* One topic of especial interest is the day by day activities of medical and pharmaceutical practitioners, much relevant information coming from account, day and prescription books. These indicate clearly the complexity of the vast stock carried by many pharmacies in the 19th century. However, the precise extent of drugs and merchandise in a particular shop at any one time can only be made from inventories drawn up at the sale of the business or the death of the owner.

Few such inventories are available in medical and pharmaceutical libraries.[1] It is, therefore, of particular interest that the Trent Collection, Duke University Medical Center, North Carolina, U.S.A., has acquired recently a Welsh inventory along with a small collection of relevant family papers (indentures and wills dated from 1834 to 1850). The inventory, unfortunately undated, possibly relates to one of the indentures, dated 1846, "Agreement for Sale of Goodwill, Stock and Furniture [of a druggist's shop in Llandeilo, Carmarthen]" between vendor William Samuel, a surgeon, and Thomas Hughes, chemist and druggist. It is well known that the increasing number of chemists and druggists, particularly in the first three quarters of the 19th century, met with severe competition from the shops of surgeon- and apothecary-general practitioners. With the case of surgeon William Samuel, however, an indenture in the collection (dated 1836) suggests that Samuel had only acquired the pharmacy on marrying the widow of a chemist and druggist. If that is the case the 1846 "Agreement for Sale" was between stepfather and stepson.

There are some reasons, however, to think that the undated inventory may be later than 1846. For instance, a number of items, such as potassium bromide, only became a popular medication some time later. Further the inventory value (£969) was considerably higher than the sale price (though that might be explained on the basis of the sale within a family). Nevertheless, whatever the precise date, the inventory (even though the first part is unfortunately lost) is of considerable interest because it illustrates an astonishing array of preparations and merchandise being sold around mid-century. Not only is the list of crude drugs and compounded medicines extensive, but so is the range of, for example, (1) brushes (e.g., "hat," "clothes," "marking," "pound," "tool," "course," "plate," "hair," "curling," and "scrubbing"), (2) combs (shell, "dressing," "nail," "tooth") and (3) spoons ("mustard," "egg," "salt," "medicine," "mother of pearl"). In addition, as in most chemist and druggist's shops of the time, there was a considerable range of dyes, paints, and soaps.

The large number of "patent" medicines listed is especially interesting, because of the many relatively expensive ones (e.g., Henry's Magnesia, Henry's Aromatic Vinegar, James's Fever Powder and Thomson's

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Cheltenham Salts) when recognised cheap alternatives were also being sold. On the other hand, while the range of medicines and other items was wide, the quantity of each item was usually small (often numbering one or two).

The small numbers of individual items perhaps suggests tight stock control, even though a reading of the inventory produces a feeling of disorder. For instance, brushes and pharmaceutical equipment occur here and there on the list, while the order in which some of the medicines appear is surprising (e.g., ambergris is followed by the poison strychnine). Even if there was an element of disorder, the shop certainly had some elegant furnishings typical of the period (e.g., a hundred mahogany drawers, faced or gold labelled), "window globes" (presumably carboys for window display) and decorative earthenware jars for tamarinds and leeches.

That the non-pharmaceutical items were a key part in the business is further evidenced by an undated leaflet, among the accompanying documents, advertising "Miscellaneous Articles sold by Thomas Hughes, Dispensing Chemist, King Street, Llandeilo." The articles listed are truly miscellaneous. Included are "biscuits (fancy and American)," "Vermacelli," "curry powder," "powder for blasting," "genuine teas and coffees," "cigars and fancy snuff," "wax carriage lights," etc. Without question, the Hughes pharmacy had a role as a general store. In small towns, in particular, that role developed not only because there was a community need, but also to ensure the economic survival of many a chemist and druggist, who commonly did little dispensing. In 1866 a "country chemist" summarised the situation as follows:

> I have been in business sixteen years, during which period I have copied 323 prescriptions. I was apprenticed in the leading business in one of the smaller country towns, the returns being about £2000 yearly, and comprised nearly all the best business of the neighbourhood; yet here, I believe, we did not average more than three or four prescrptions weekly, and had the business been confined to drugs I do not suppose it would have been worth carrying on.[2]

It is one job of local historians to help document the extent of general-store/pharmacies and their role in communities.

Notes

1. Inventories are more commonly housed in public record offices; however, they were sometimes published for auction purposes. Cf. *Catalogue of the Whole of the Extensive and Valuable Stock in Trade of Drugs, Chemical Preparations in the Premises of Messrs. Balkwell & Sons . . . Which will be Sold by Auction by Paddon & Son,* Plymouth, n.d. [1826]. (Copy in library, Pharmaceutical Society of Great Britain.

2. *Pharm J. & Trans.,* 1866-67, *8,* 292. The economic importance of providing items for home medicine in the 19th century is considered by Crellin, J. K., "British Pharmacy and 19th Century Domestic Medicine," *Veröff. Int. Gesell. Gesch. Pharm.,* 1969, *32,* 81-86.

The Mortar of Charles Angibaud

by J. BURNBY

In the *Pharmaceutical Journal* of March 26, 1966 there was published the well known paper of Mrs Lothian Short on the Angibaud mortar. She related that Charles Angibaud, a Huguenot refugee, came to this country shortly before the Revocation of the Edict of Nantes in 1685. Charles, his wife and his family were naturalised in 1685 and three years later he was made a freeman of the Society of Apothecaries of London by redemption. On average the redemption fee was £20 but on this occasion it was a mere ten guineas, so perhaps the Court of Assistants tempered the wind to the shorn lamb. Charles was a faithful member of his new professional body and by 1728 he had become Master.

Two of his sons, Charles and Daniel, followed their father as apothecaries. It is known from an advertisement in the *Daily Advertiser* of April 1743 that Charles the younger had now forsaken pharmacy for medicine but that he still intended to sell 'the famous Pectoral Lozenges of Blois' invented by his father sixty years earlier, from the house of his aunt, the widow of Dr Misaubin, in St. Martin's Lane.

In the same March *Pharmaceutical Journal* Pierre Julien related that Charles Angibaud came from a family who had formed a dynasty of apothecaries in the town of Saintes. His half-brother Daniel II, his father Daniel I, possibly a grandfather Jean and the sons, Charles II and Elie II, of another half-brother, Elie I, were all of the profession and most of them practised in the Grande Rue. Charles II rose to a position of responsibility amongst the apothecaries of Saintes and in 1746 became controller-inspector of the Company of Apothecaries, but Elie II was the black sheep of the family, never settling to any particular work, always in debt and even abandoning a wife and two children in Copenhagen.

By August 1745 he was in London writing to his brother in Saintes, "There is nobody who would be more in a condition to do me a service than Mme. Misaubin, but as far as it concerns juice of liquorice, she regards me with caution, because she fears apparently that it might do harm to Cousin Angibaud, her nephew, who has quitted and sold the shop of his grandfather, devoting himself to surgery and is living with his Aunt Misaubin . . ." On July 4, 1749 he continued, "Our cousin Misaubin still continues in her jealousy of me on account of the liquorice paste . . . Her nephew Angibaud, who was a perfect debauchee in all sorts of vice left a long time ago . . ." Then two years later (1751) he told his brother that he had but recently discovered that, "It was with this very gum [Senegal] that our late Uncle Angibaud made his liquorice paste; his son has continued to do so, his grandson likewise. It was the druggist who sold it to them who told me and I have seen it myself used by the father of the latter . . ."

As Mons. Julien has pointed out there is some divergence between the advertisement of 1743 and Elie II's letters

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concerning who had sold the shop and applied himself solely to surgery, and also that the identity of Mme. Misaubin should be solved.

It was first discovered in Munk's Roll of the College of Physicians that a Dr John Misaubin M.D. had been admitted as a licentiate on June 25, 1719 having graduated as a doctor of medicine on July 7, 1687 from the university 'of Cahos, in France', and that he had died in April 1734. Investigation of the Huguenot records showed that a Jean Misaubin and his father Jacques came to England some time after the Revocation, possibly as late as 1700 or 1701, for the first record of them is of their 'reconaissance' or re-affirmation of their protestant faith, at the Huguenot church of Threadneedle Street on June 1, 1701. Jean was 28, Jacques 75 and they came from Guienne.[1] On April 8, 1707 John Misaubin, son of James by his wife Elizabeth, born at Musidan in France, was naturalised.[2] Jean/John was already well integrated into the Huguenot community of London as in July 1705 he became godfather of Marie Elizabeth, daughter of Pierre La Coste, "dem. dans Suffolk St. par. St. Martins des Champs à l'enseigne de la Boule d'or, et de Jeanne", and carried out the same duty for Anne Caillou in 1706 and Anne Blanchard in 1708.[3]

Then on January 6, 1709 the register of the church in Hungerford Market recorded the marriage between "Le Sieur Jean Misobin docteur en médicine dem. in Berwick St. par. St. James & Delle. Marthe Angibaud, par. de St. Martins in ye Filds". (sic). A C. Angibaud was a witness.[4] Marthe or Martha was the daughter of Charles, the owner of the manificent mortar and originator of the lozenges.

The year Charles Angibaud became Master of the Apothecaries he wrote his will, being as he said ". . . of an advanced age but of good health and sound mind . . ." It was not proved until January 1732. Three of his children and two of his sisters are mentioned in it. He gave only one guinea to his daughter Martha, wife of Dr John Misaubin, as he had already laid out £400 in full discharge of his part of the marriage articles. His other daughter, Jane Mary wife of Mr Charles Saunders, was bequeathed £350, but if she or her children had died then the bequest passed to his son Daniel who was now living in Madeira.

Charles seems to have been rather suspicious of his son's activities because he would receive neither this £350 nor an additional £100 unless he and his children—if he had children—did not settle in England and were 'true Protestants'. Should Daniel not comply with his father's wishes then the bequests passed to Charles' two sisters, Mary Dumas, widow and Ann Prevoust, widow. The residue of the estate including stock of the South Sea Company was to go to daughter Jane Mary, who was made the executrix.[5] It is noticeable that there is no reference to his other son Charles.

Only two years later on April 6, 1734 John Misaubin, 'doctor and practitioner in physick' made his will. He begins by baldly stating, "By articles made upon marriage with my wife Martha, sufficient provision was made for her maintenance, which I hereby ratify and give her one shilling and my best French Bible". The whole of his estate including ". . . all ready money and that due to him, and diamonds, jewels, watches, plate, pictures, household furniture, coaches, chariots, horses, goods and chattels" he bequeathed to his son Edmund. If Edmund died unmarried before he was 21 then the bequest was ". . . to

go to the sole use of a French hospital near Hoxton, commonly called the Providence, and that the same or any part thereof shall never come to my wife or any of her relations of the family of Angibaud". (sic). Furthermore, should his son die young then, "Since I have always preferred the publick before a private interest" he ordered that "all my Nostrums and Receipts for the Cure of distemper and maladies shall . . . be communicated and published for the use and benefit of the publick". He made his son sole executor and entreated His Grace the Duke of Richmond, His Grace the Duke of Montagu, and the Right Honourable the Lord Baltimore to supervise the execution of his will, and asked them to accept a ring each valued at twenty shillings. His two friends John Fouvive and Samuel Baldwyn were appointed to join with them as joint supervisors and overseers.

The last laugh seems however to have lain with his wife because on October 22 of the same year "A power was granted to Martha Misaubin the guardian to John Edmund Misaubin, a minor, the sole executor named in the will of John Misaubin, late of the parish of St Martins in the Fields, Middlesex, to administer the goods, chattels and credits according to the tenor and effects of the said will."[6]

(Continued on p. 8)

References

1. Publications of the Huguenot Society of London, *XXII:* 34. The age of 28 is suspect as Jean is unlikely to have qualified at 14 years.
2. Ibid. *XXVII:* 57.
3. Ibid. *XXXI:* 14, 16; *XXIX:* 92.
4. Ibid. *XXXI:* 44.
5. P.R.O. Prob. 11 1732 f.l.
6. P.R.O. Prob. 11 1734 f. 222.

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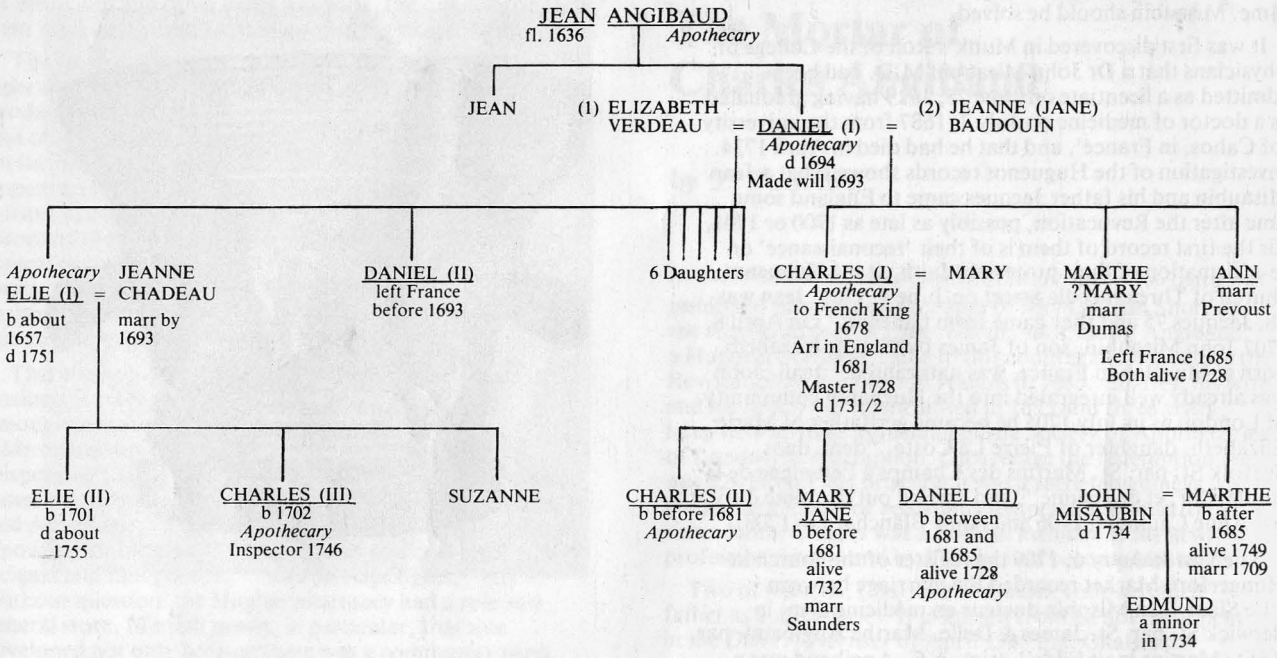

This family tree is based on that of the articles in the *Pharmaceutical Journal* but should be treated with caution. If Charles (I) was apothecary to the French King by 1678 as the inscription on the mortar suggests then he could scarcely be less than 30 in 1681, making his year of birth 1651, which clearly makes the date of birth of his *older* half-brother of 'about 1657' impossible. Furthermore it is unlikely that Elie (I)'s children would be twenty years *younger* than those of Charles (I). Possibly the dates of the marriages of Daniel (I) should be reversed.

Letters

Unpublished Jacob Bell Manuscripts

The finding of two unpublished items in the Trent Collection of Duke University Medical Centre is one further example of the wealth and depth of manuscript material, relating to British medicine and pharmacy, that is to be found in the United States. While the two items tell us nothing new about Bell, they do provide further appreciation of his artistic ability and interests.

Jacob Bell's marvellous sketchbook, kept during his apprenticeship to record mishaps and breakages, is in the library of the Pharmaceutical Society. Bell's ready ability with pen and ink is further seen in one of the Trent Collection items. An unknown person was sent by Bell to collect a "small brown paper parcel" left on the counter at 338 Oxford Street. Bell gave the person a note about the parcel, which included a quickly executed sketch of it, leaving his colleagues at 338 in no doubt about the sender.

The second item in the Trent Collection was addressed to William E. Carpenter (1792-1866) who later became keeper of prints in the British Museum. It was sent from Strasbourg on October 14, 1840. Bell was evidently there with his friend Edwin Landseer, the animal painter, who appended a note concurring with Bell's support of Carpenter as Secretary of the Artists' Benevolent Fund.

The short letter reads as below

John K. Crellin
Duke University Medical Center
Strasbourg

My Dear Sir,

I imagine that your character and abilities are too well known to require any confirmation or support from an obscure individual like myself but I have great pleasure in adding my mite to your treasury—I consider my absence from town a misfortune inasmuch as it deprives *me* of the pleasure which I should also have felt in personally advocating your cause, for however little I might have added to your strength it would have been a satisfaction to me to prove the sincerity of my good wishes and confidence in your merit as a candidate for the office of secretary of the artist benevolent fund.—Believe me

My Dear Sir
I remain
Yours most sincerely
Jacob Bell

Printed by Henry T. Cook & Co. Ltd., Dryden Works, Brent Crescent, NW10

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Newsletter of the BRITISH SOCIETY FOR THE HISTORY OF PHARMACY
Contributions to the Editor: Arthur Wright F.P.S., D.B.A. · 36 York Place · Edinburgh · EH1 3HU

ERRATA

The Editor regrets the following printer's errors on page 1. These should read as follows:

Vol. 9 No. 2
August 1979

Officers

President	Miss D.A. Hutton
Vice-President	Mr. A. Wright
	Dr. T. D. Whittett
Treasurer:	Mr. J. C. Bloomfield

Forensic Medicine at Guy's Hospital. She later became a full-time professional writer.

Dr. Douglas Selleck was born in St. Austell, the heart of Cornwall's china clay country. In 1947 he wrote a monograph, "The China Clay of Devon and Cornwall", and in the following year published a list of Plymouth Quakers—"Plymouth Friends". Both these works featured William Cookworthy, who discovered China clay in Cornwall and manufactured at Plymouth, and later in Bristol, the first English porcelain. Dr. Selleck has spent several years researching Cookworthy's life and background which culminated in the book "Cookworthy—A man of no Common Clay" published by Baron Jay, Plymouth, 1979.

Will members wishing to attend the History of Pharmacy session, please inform the Secretary at 36 York Place, Edinburgh EH1 3HU.

SPECIAL GENERAL MEETING

At its meeting in April the Committee of the British Society for the History of Pharmacy agreed that a Special General Meeting of members of the Society should be held to discuss a possible increase in membership fee from £2.00 to £3.00 per annum. Members are therefore notified that a Special General Meeting will be held at 1 Lambeth High Street, London SE1 7JN on the evening of October 25, 1979 at 7 p.m. prior to the talk being given that evening by Miss Phyllis Edwards on "Sir Hans Sloane and some eminent apothecaries of the period". As with all our evening meetings, coffee and biscuits will be provided at 6.30 p.m.

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PHARMACEUTICAL HISTORIAN

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BRITISH PHARMACEUTICAL CONFERENCE HISTORY SESSION

Humphrey Davy and William Cookworthy are the subjects of the two papers to be delivered during the History of Pharmacy session at the British Pharmaceutical Conference, Exeter, September 13, 2.15 p.m.

"Held by a glittering eye: Humphrey Davy as a poet-philosopher" is the title of the paper by Molly Lefebure, whilst Dr. A. D. Selleck is dealing with "William Cookworthy—an 18th Century Polymath". Molly Lefebure, who lives in Cumberland, has written several books on the Lake country, chiefly concentrating on the social history, and a two-volume biographical study of Samuel Coleridge Taylor of which volume one has been published and volume two is to be published shortly. She is at present editing unpublished letters of Mrs. Samuel Coleridge Taylor.

Molly Lefebure started her career as a newspaper reporter in London and was the first regular woman reporter to cover police and assize court hearings. Then followed a long period as private medical secretary to Professor Keith Simpson, Home Office pathologist and Head of the Department of Forensic Medicine at Guy's Hospital. She later became a full-time professional writer.

Dr. Douglas Selleck was born in St. Austell, the heart of Cornwall's china clay country. In 1947 he wrote a monograph, "The China Clay of Devon and Cornwall", and in the following year published a list of Plymouth Quakers—"Plymouth Friends". Both these works featured William Cookworthy, who discovered China clay in Cornwall and manufactured at Plymouth, and later in Bristol, the first English porcelain. Dr. Selleck has spent several years researching Cookworthy's life and background which culminated in the book "Cookworthy—A man of no Common Clay" published by Baron Jay, Plymouth, 1979.

Will members wishing to attend the History of Pharmacy session, please inform the Secretary at 36 York Place, Edinburgh EH1 3HU.

CONGRATULATIONS

The American Institute of the History of Pharmacy has announced the award of the George Urdang medal for 1979 to Professor John E. Crellin of the Duke University Medical Center, North Carolina. The award "conferred for distinguished pharmacohistorical writing internationally" recognised "his excellent research on the history of pharmaceutical artifacts including his *Catalogue of Medical Ceramics in the Wellcome Institute of the History of Medicine, Volume 1, English and Dutch (1969)*".

Professor Crellin is a member and past-president of the Society.

OFFICERS

At the May committee meeting the following officers of the Society were re-elected.

President:	Mr. a. Wright
Secretaries:	Dr. W. E. Court
	Dr. T. D. Whittett
Treasurer:	Mr. J. C. Bloomfield

SPECIAL GENERAL MEETING

At its meeting in April the Committee of the British Society for the History of Pharmacy agreed that a Special General Meeting of members of the Society should be held to discuss a possible increase in membership fee from £2.00 to £3.00 per annum. Members are therefore notified that a Special General Meeting will be held at 1 Lambeth High Street, London SE1 7JN on the evening of October 25, 1979 at 7 p.m. prior to the talk being given that evening by Miss Phyllis Edwards on "Sir Hans Sloane and some eminent apothecaries of the period". As with all our evening meetings, coffee and biscuits will be provided at 6.30 p.m.

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Italian charlatans in England

by LESLIE G. MATTHEWS

The English temperament has always been susceptible to the claims of those who could cure human ailments by unorthodox means. In the 18th century in particular the public were warned against unqualified medical practice. It was then said that England was more plagued with ignorant quacks and empirics than any country in Europe. Barbers, tailors, rope-dancers, all turned into physicians overnight, calling themselves learned doctors and extracting money for their worthless remedies.

There is some distinction to be made between the mountebank who travelled from city to city and the charlatan who usually had a fixed residence. The mountebank often took with him a group of actors or dancers on the ropes and he had a stage or platform erected for performances, after which he began to harangue the crowd in the hope of persuading them to buy his nostrums. Always he seems to have a servant with him dressed in harlequin garments and often travelled with a monkey to entertain the public.

The principal countries from which foreign mountebanks and charlatans came to England were France, Germany, the Netherlands and Italy.

We know of some in the 16th century because the College of Physicians, founded in 1518, always jealous of the rights of its members and licentiates to practise medicine and in the interest of public welfare, suppressed all unlicensed practitioners whose diagnosis and supply of remedies came to their notice.

The Annals of the College record the first of these charlatans in the year 1542: the offenders were fined heavily. In 1554 the College secured the right to commit the offenders to prison if they failed to promise faithfully not to practise again as physicians. They had to remain in prison until they paid a fine and gave the required promise. Members of the College who lived outside London were given authority to take action against charlatans in the locality where they resided.

A few Italian names are mentioned in the middle of the 16th century but not until 1570 are there any details of Italians who were brought before the disciplinary committee of the College. One of these was Bartholus Sylva of Turin charged with abortion and with attempting to cure an old woman, and also with administering an antimony cordial to another person. He tried to obtain a licence to practise medicine from the College but he was found to be ignorant of medicine and philosophy. He was fined £20 but a year later was again before the College and this time was sent to prison. He was released only because of the intervention of Lord Burghly, chief minister of the Queen Elizabeth, and of the Earl of Leicester, both of whom were favourable to charlatans.

Another Italian about the same time, 1571, was Baptista, an apothecary who was charged with abortion and with practising medicine. He was fined £20 and told that if he did not pay he would receive corporal punishment.

In 1637 Gulielmo Corvetto wanted to sell his medicines in Dorchester, Dorsetshire, but the Mayor objected and would not allow him to do so until he had shown his authority. Corvetto said he had been born in Florence, that he had lived in Padua for four years and there he took a degree as Master of Arts. He had practised medicine in France, Spain and Germany. He said he had lived in England for 18 years but he failed to get the permission he wanted.

In the second half of the 17th century came a notorious Italian charlatan to London, one Salvator Winter, from Naples. His handbill recorded that he was then about 90 years of age but was as strong and healthy as a man of 50. The reason he gave was that he always carried his *Elixir Vitae* in his pocket during the day and that he slept with it under his pillow at night, taking a spoonful or two when he needed it. This elixir was so potent that it would cure all diseases. It would even raise the dead if God had not reserved that secret to Himself. In 1688 when he had been practising as a physician for 20 years he asked leave to be examined by the College of Physicians, intending if possible to secure a licence from the College. The Committee found he was unable to speak Latin—a severe handicap at that period—and he was dismissed as not fit for examination. This did not stop him: he still continued to issue his handbill advertising the elixir. A barrister complained to the College about the huge bills that Winter charged for three months' treatment. The College summoned Winter to appear before them but the only note relating to him is that he had absconded. Salvator's son, also named Salvator, continued to sell the elixir, advertising that he was the 'son of the late Ancient and Famous Physician'. The handbills of both father and son display the Royal Arms and invariably end with the words: 'VIVAT REX'.

Of international notoriety, also in the 17th century, was Giovanni Francesco Borri, an Italian alchemist, whose deceptions were finally uncovered and who was thrown into prison, dying in the Castel del Sant Angelo in Rome. Borri's *Sovereign Julep* was sold in London by his compatriot, Morandi, at Morandi's Chocolate House in Drury Lane. After Borri's death Morandi continued to sell the Julep, saying that he had got the recipe through a nobleman friend of Borri.

Licensing mountebanks

It was after King Charles II had been restored to the throne of England in 1660 that a system of licensing mountebanks to travel from city to city was introduced. Though no fee for such a licence is recorded it is likely that a heavy payment had to be made for the Royal Exchequer was always empty. If the applicant for a licence could describe himself as a doctor or surgeon, and most did so, without the shadow of a reason, and he was recommended by influential persons, the licence was usually granted without delay. The persons holding such licences were permitted to travel from city to city: they were authorised to set up a stand on which performances could be given but they had to comply with the city's laws. I have traced the journeys of some of these mountebanks—some were 15 days in a town, others stopped for up to three months with the approval of the authorities.

Two of these, George Moretto and Joannes Micha Philo, both Italians, are of some interest. Moretto was actually appointed a surgeon to King Charles II but he was licensed to travel on the 11 April 1665. Fortunately copies of some of the licences granted in the name of the King have survived.

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Letters

Victorian chemists in Northampton

Referring to J. K. Crellin's article on "Pharmacies as General Stores in the 19th Century", I am at present producing a directory of eminent Victorian chemists in Northampton and I think we had a family of chemists whose style of trading was a forerunner of the type of general store developed by Jesse Boot.

John Henry Blunt came to Northampton in 1846 but figured mainly as a medical botanist opening an Eclectic Medical Botanic Institute in 1862. A pharmacy was opened in the early 1870's and a wholesale department several years later. J. H. Blunt had three sons who qualified as pharmacists and further shops were opened in Birmingham and Coventry.

A scrapbook of pharmaceutical formulas was put together by J. H. Blunt and includes a wealth of information on preparations supplied from his shops. Included in the book (which I am pleased to say is in my collection) is an advertisement for a Great Stock-Taking Sale—providing details of the groceries, etc., kept in stock.

The address on the leaflet is given as 2, Parade, Northampton, a building occupied from 1866 until 1904 when the site was demolished for road improvements.

Although no date is given it does show that Blunt's business was developed on the lines of a general store. Towards the end of the 19th century, advertising pot-lids were issued bearing the trading title of Drug & General Supply Co. Ltd.

A great deal of information could certainly be obtained from the book as it includes recipes, e.g. Woodwards Gripe Water, supplied by manufacturers, chemists, etc. from all over the country and would be available on loan if required.

J. Fitzhugh

68 Penrhyn Road
Far Cotton
Northampton

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Archicatharticum. This was wrapped in paper charms. Of the first 50 imported, 41 were brought into the College. Bernardini was fined £20 and put into the Debtors' Prison until he paid the fine. He admitted that if he had sold the whole 50 doses he would have imported a further 1000 or more.

One of the remedies sold at this time was *The Golden Vatican Pill.* Another was *Locatelli's Balsam,* sometimes called the *Genoese* or *Italian Balsam.* This was made of turpentine, olive oil, red sandalwood or dragon's blood, with plenty of Spanish or red wine. It was so satisfactory that a formula for it was incorporated into the *London Pharmacopoeia* of 1746, in the Preface of which the College of Physicians were proud to say they had deleted so many of the old and ineffective medicines.

Not only were medicines from Italy widely advertised but one charlatan, announcing his arrival from Italy in the 18th century extolled the virtues of a most delicate face wash and other rare things never before made use of in England. This was probably a quack named Pecune whose Talc Water (made from talc and pearls), with his Book of Secrets, was sold by many advertisers who called themselves 'Gentlewomen'.

As meeting places for the 17th and 18th century intellectuals the London coffee houses gained a high reputation. Scientists and antiquaries chose to have their learned discussion in coffee houses. Thompson notes that the very first coffee house opened in London was established by Pasqua Rosee of Ragusa in Sicily in 1652 . Rosee issued an advertisement describing the 'Vertues of Coffee Drink' which he claimed he was the first to make and sell in England.

"The dead to life"

Thompson also has a good story of a fashionably dressed Italian mountebank named Mantacinni who was very plausible and who always had with him a servant equally well dressed and who rode in a chariot with fine horses. When Manticinni arrived once at Lyons he announced that he was able to bring the dead to life and that within 15 days he would go to the cemetery and bring to life all who had been buried there within the past ten years. This caused such excitement amongst the people of Lyons that Mantacinni was obliged to seek protection given by the magistrates of the city. Nevertheless it brought crowds to buy his *Baume de Vie.* As the day approached the servant grew anxious, fearing that his master would never do what he had promised. Mantacinni said: "Wait". Soon afterwards he received a letter imploring him not to carry out his promise because the writer had endured for many years the fury of his wife now dead. He promised Mantacinni 50 louis in gold if he would keep his secret to himself. Other letters followed from persons who for various reasons did not wish their fathers or mothers brought back to life. Money came in fast. When the fateful day arrived, the chief magistrate came to Mantacinni imploring him not to carry out his promise, saying that they all knew he could do this marvel but they did not wish to see it. The City would give him a certificate that he was able to do what he had promised, to revive the dead, and that it was their fault they did not see the promise performed. Mantacinni left Lyons well pleased with the large sums of money he had collected and with the certificate, no doubt using this to extract still more money from the gullible public in other cities.

There is no reason to think that the Italian mountebanks and charlatans who came to sell their remedies in England were any worse than those from Germany and elsewhere. All saw that England would provide them with a good market for their medicines if they could interest the public by appearing on a stage or by issuing handbills advertising their goods.

Chief Sources:

British Museum Library—Medical Advertisements 1600-1800, 2 volumes.
—Harangues of Mountebanks,
—1 volume

The Annals of the Royal College of Physicians of London, 1518-1612.

Matthews, Leslie G. 'Licensed Mountebanks in Britain'. *J. Hist. Med.* 1964, **XIX**, 28-41.

Thompson, C. J. S. The Quacks of Old London. London, 1928.

Appendix

Copy of Licence granted to Joannes Micha Philo, 5 August 1667

CHARLES, by the Grace of God, King of England, Scotland, France & Ireland, Defender of the Faith, etc., To all Mayors, Justices of the Peace, Bailiffs, Constables, and all other Our Officers & Ministers or any of Our Loving Subjects whom it may concern—Greeting: Whereas humble Suit hath been made unto Us on behalf of Joannes Micha Philo that in consideration of his experience and skill in Medicine and Chirurgery, which he hath practised for divers years with good success in many of Our Towns and Corporations (from whence he hath received very ample testimonies & approbations) That We would therefore be pleased to grant him Our Royal Licence to continue the same: We have thought meet to condescend unto the said Request; and do hereby Licence & Authorise him the said Joannes Micha Philo freely to vend and dispose of his Medicines & practise his skill in Physic and Chirurgery in any of the Cities, Towns & Boroughs within Our Kingdoms & Dominions; And We do further require That you quietly permit him to travel from place to place, & to expose his said Medicines to sale in such parts or places of any Our said Cities, Towns & Boroughs, upon a stage or otherwise in such manner as he shall judge most proper & convenient for that purpose & with the Approbation of the Magistrates and Officers in every place respectively; And that you suffer no stage to be erected by or near the place where he hath erected one so long as he remains there, nor any other hindrance or molestation to be given to him or his servants in doing and practising the Premisses according to this Our Royal Licence; He and his said servants demeaning themselves orderly & peaceably according to the Laws and Statutes of Our said Kingdoms & Dominions

For which this shall be both to you and him a sufficient Warrant—

Whitehall, 5th August, 1667 in the 19th year of Our Reign

/In Margin/ Order Lords Commissioners to Pass a docquet.

Public Record Office, London. S.P.44 Entry Book 25, ff. 26 b, 27.

Note: The spelling has been modernised in this copy.—L.G.M.

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Philo's licence was issued on 5 August 1667. It is addressed to all mayors and magistrates. The licence recounts Philo's skill in medicine and surgery and that he had already been in several towns and cities in England. He was authorized to sell his medicine throughout the Kingdom and Dominions and he could sell them from a stage or elsewhere with the approbation of the magistrates in the town or city. The licence was especially favourable to Philo because no other stage was to be permitted near Philo's neither was he nor his servants to be molested in any way. They must however obey the law—see Appendix.

A licence in almost similar terms was granted to Pier Maria Mazzantini, an Italian and a self-appointed "Professor of Physic". A great quarrel arose between Mazzantini and another mountebank named Cornelius Tilborg from Holland. Both were selling *Orvietan*, that much-praised electuary which is said to have been devised by Lupi of Orvieto in Tuscany at the end of the 16th century and to be effective against poisons. Orvietan quickly became popular with all charlatans and it was taken into the pharmacopoeias about 1665. Louis XIV tried to suppress its sale but failed because pharmacists and all charlatans throughout France sold it.

Mazzantini's quarrel with Tilborg was about the sale of Orvietan. Tilborg came into prominence when he demonstrated to King Charles II the power of Orvietan to counter the poisonous effect of 60 grains (4 grammes) of arsenic sulphide given to one of Tilborg's servants, who survived the ordeal. (Tilborg was unlucky on another occasion when the servant died). The King was so impressed with Tilborg's demonstration that he immediately gave him a gold medal and chain and enrolled him a royal physician.

Mazzantini said he obtained the Orvietan formula in Orvieto in 1646 and that he came to England in 1660. When Tilborg was poor Mazzantini allowed Tilborg to have the formula but only for use outside England. Tilborg sold it everywhere. Mazzantini then petitioned the King, Charles II—a copy of the petition is still on record. His petition says that he is an Italian and a Tuscan, that he preserved the life of one of the King's servants by administering Orvietan, and he asks the King to prevent Tilborg selling Orvietan because it is harming his (Mazzantini's) own livelihood. Mazzantini shows that he intended to make his living in Britain and that he had married a lady connected with the Church of Scotland. Alas! there is no record that the king took any notice of Mazzantini's petition.

Many charlatans are known to us only by their handbills or advertisements in the newspapers. Often their names are not given, the only indication being, for example, "A learned Doctor from Italy to be found at the Sign of the Queen's Arms" in a named street in London. One of these, described as an Italian Doctor who specialised in the treatment of fevers, assured the public he had never been a stage mountebank but lived in Holborn, London. His boast was that he had brought from Italy 'The Right Roman Orvietan' which he sold for half-a-crown for three ounces.

The College of Physicians was kept very busy trying to suppress the illegal practice of medicine. A batch of charlatans appeared before them in 1608. Among them was Philip Bernardini who sold an imported medicament called

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(pp455-546)

TRANSACTIONS OF THE BRITISH SOCIETY FOR THE HISTORY OF PHARMACY

Volume 1, Number 4

J. G. L. Burnby: **Apprenticeship Records**
T. D. Whittet and M. Newbold: **Some Eminent Cambridge Apothecaries**

An Act of the 8th year of Queen Anne has led to a series of apprenticeship records, which are lodged in the Public Record Office. They run from 1711 to 1805 and provide a hitherto untapped source of the 18th Century. The history of apprenticeship as developed by the gild system in its heyday and the gradual change in its mode of operation, is examined. The medical and pharmaceutical scene is given particular attention and deductions made as to the position of the apothecary, surgeon and druggist in the community. There are a number of tables showing the sums of money given for the premiums, and the geographical situation of the rising chemists and druggists.

Dr. Whittet's paper shows the wealth of medical material which is to be found in our provincial towns if the local records are systematically studied.

Price £2.00 (Members £1.75)

Still available

Volume 1, Number 1

M. Rowe and G. E. Trease: **Thomas Baskerville, Elizabethan Apothecary of Exeter**

(This paper includes a fully documented inventory of Baskerville's 16th Century house and shop.)

J. Cule: **The Diagnosis, Care and Treatment of Leprosy in Wales and the Border in the Middle Ages**

Price 80p (Members 65p)

Volume 1, Number 2

Jane O'Hara May: **Foods or Medicines**

(A study in the relationship between foodstuffs and materia medica from the 16th to the 19th Century.)

Price 75p (Members 60p)

Volume 1, Number 3

William H. Helfand: **James Morison and his Pills**

(A study of the 19th Century pharmaceutical market.)

J. K. Crellin: **A Note on Dr. James's Fever Powder**

Price £1.50 (Members £1)

Orders, accompanied by cheques payable to the "British Society for the History of Pharmacy", should be sent to the Secretary, B.S.H.P., 36 York Place, Edinburgh EH1 3HU.

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PHARMACEUTICAL HISTORIAN

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Contributions to the Editor: Arthur Wright F.P.S., D.B.A. · 36 York Place · Edinburgh · EH1 3HU

British Pharmaceutical Conference History Session and Sponsorship

This issue of the Pharmaceutical Historian is devoted to the two papers given by the speakers at the BP Conference, History Session in Exeter.

The Society acknowledges the generous sponsorship of R. Gordon Drummond Ltd in respect of the Conference session and this "Historian". Their support has made possible the publication of more extensive abstracts of the papers in a larger than usual issue.

SUBSCRIPTION

At a special general meeting of the Society held on October 25 it was agreed that the annual subscription from January 1 1980 will be £3. Members who pay their subscription by a standing order are asked to amend the details immediately to avoid later complications and correspondence.

A DATE FOR YOUR 1980 DIARY

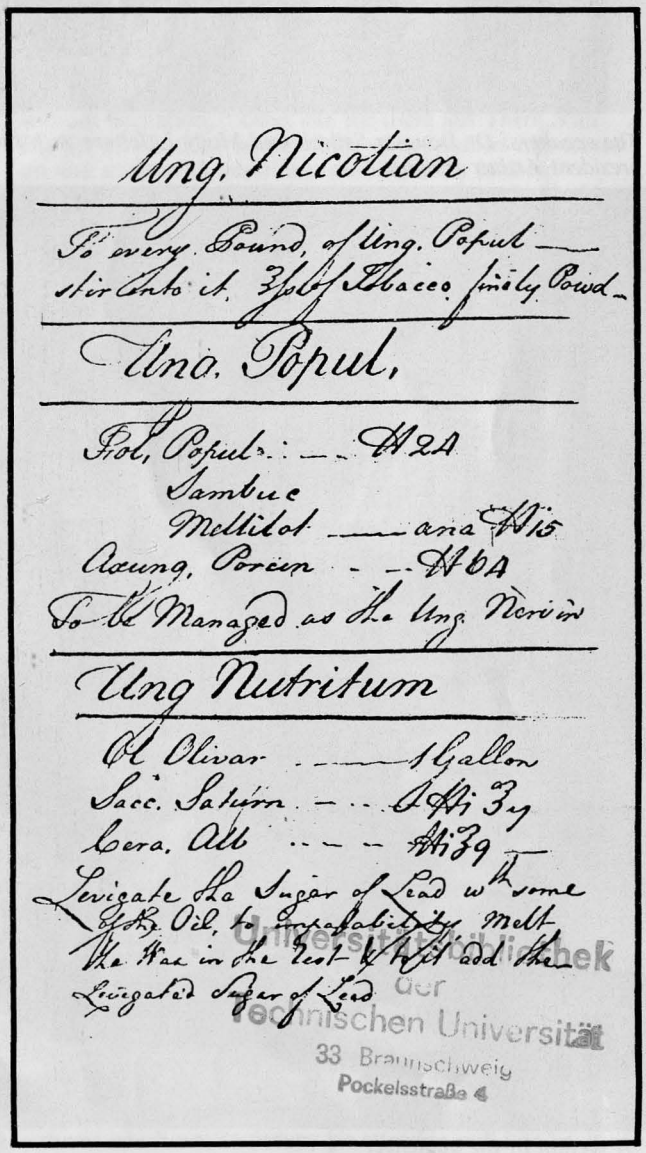
On February 6 at 6pm the Society is holding a joint meeting with the Pharmaceutical Society of Great Britain and The Royal Society of Medicine at 1 Lambeth High Street London WE1 7JN. Miss D. Jones is to present a paper "Nicholas Culpeper and his Pharmacopoea". Mr R.G. Todd will deal with "Some drugs of the 17th century."

APOLOGIES

The Editor regrets the following printers errors on page 1 of the previous Pharmaceutical Historian. These should read as follows:—

Vol.9 No. 2, August 1979

Officers President Miss D.A. Hutton
Vice president Mr A. Wright



Right: A page from Cookworthy's chemical notebook.

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BRITISH PHARMACEUTICAL CONFERENCE HISTORY SESSION

The speakers: Dr Douglas Selleck and Molly Lefebure with the president BSHP Miss D.A. Hutton and vice president ***Arthur Wright.***

A section of the audience.

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HELD WITH A GLITTERING EYE

Humphry Davy as a Poet-Philosopher

by MOLLY LEFEBURE

It is an ancient Mariner
And he stoppeth one of three:
'By thy long beard and thy glittering eye
Now wherefore stoppest me?

'The Bridegroom's doors are opened wide,
And I am next of kin;
The Guests are met, the Feast is set —
May'st hear the merry din.' ...

He holds him with his skinny hand,
Quoth he, "There was a ship —'
'Now get thee hence, thou grey-beard loon!
Or my staff shall make thee skip.'

He holds him with his glittering eye –
The wedding-guest stood still
And listens like a three year's child;
The Mariner hath his will ...

Coleridge, Samuel Taylor,
The Ancient Mariner (1802)

Humphry Davy and Samuel Taylor Coleridge first met at Bristol in the autumn of 1799, when Davy was twenty one and Coleridge twenty seven. Coleridge was already famous; as a poet, as a political writer of strong radical persuasion, as a lay Unitarian preacher, and, above all, as a miraculous talker. He had just returned from Germany after a year's study of the German language and German philosophy. His patrons were Josiah and Thomas Wedgwood.

As for Davy, he, for the past twelve months had been superintendent of Dr. Beddoes' newly founded Medical Pneumatic Institution at Clifton, having prior to that been apprenticed to John Bingham Borlase, a surgeon and apothecary of Penzance, Davy's birthplace. Davy, at the time of meeting Coleridge, was within months of becoming famous with his discovery of nitrous oxide and his resultant publication, *Researches, Chemical and Philosophical; Chiefly Concerning Nitrous Oxide, or Dephlogisticated Air, and its Respiration*

The Pneumatic Institution combined a research laboratory, a lecture theatre and a hospital. The whole scheme was experimental and was enthusastically supported by Thomas Wedgwood, a chronic invalid, who hoped to regain his own health by inhaling Dr. Beddoes' "factitious airs". The patients at the Institution were drawn from the ranks of the wealthy progressive intelligensia.

Coleridge had been introduced to Bristol in his undergraduate days by Robert Southey. The impact made upon Bristol society by Coleridge had been explosive. As Thomas Poole, the radical social economist and tanner from Nether Stowey, observed in a letter to Coleridge, "Providence has been pleased, if I may so express myself, to drop you on this globe as a meteor from the clouds." Coleridge, and Humphry Davy in mutual stimulation, flashed and scintillated in each other's company whenever they had the opportunity to be together.

The young Davy was no polymath like the young Coleridge, but he had a breadth of interest and vision, a flexibility of mind and gift of imagination that delighted his new friend. Asked once how Davy compared with other men of outstanding ability of that day Coleridge replied without hesitation, "Davy can eat them all! There is an energy, an elasticity in his mind, which enables him to seize on and analyse all questions, pushing them to their legitimate consequences. Every subject in Davy's mind has the principle of vitality. Living thoughts spring up like turf under his feet."

Furthermore, in Davy, Coleridge recognised a fellow poet, certainly in temperament if not in actual accomplishment. In fact, Davy wrote a surprising amount of poetry during his lifetime; however, Coleridge's well known declaration that if Davy had not been the greatest chemist then he would have been the greatest poet of his age demands rather closer scrutiny than at first appears necessary. Coleridge here does not mean precisely what he seems to be saying. The words, at first sight, seem to be saying that Coleridge thought Davy a great poet. This was not the case. Davy showed Coleridge a good deal of his poetry and Coleridge criticised it for him. Both Robert Southey and Wordsworth, each of whom became Poet Laureate, regarded Coleridge as their superior as a poet, they heeded his criticism and bowed to his judgement. Coleridge courteously extended his critical analyses to Davy's verses, but his true opinion of them is probably most accurately conveyed in an unbuttoned remark he once made to Robert Southey that, "All men are poets in their ways, tho' for the most part their ways are damned bad ones."

Davy, like many poets produced his best poetry in his earliest period. A Cornishman, and of decidedly Celtic temperament, by the age of five he was composing and reciting verses. He was visionary by nature; his paternal grandmother had the second sight. She lived in a haunted house and took ghosts absolutely for granted; these things she often talked about with her small grandson and it was from her that Davy received his lifelong feeling of neighbouring the invisible, as Treneer puts it.

Of all Davy's poems that have survived for us the most impressive is the early draft of a poem inspired by the sight of the tombstones of his forebears in the churchyard at Ludgvan; a theme which was to occupy his attention well into adult life.

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This early draft, which was scribbled unfinished in a notebook, reads,

My eye is wet with tears
For I see the white stones
That are covered with names
The stones of my forefathers' graves

The grass grows upon them
For deep in the earth
In darkness and silence the organs of life
To their primitive atoms return

Through ages the air
Has been moist with their blood
Through ages the seeds of
the thistle has fed
On what was once motion and form

The white land that floats
Through the heavens
Is pregnant with
that which was life
And the moonbeams
that whiten it came
From the breath and spirit of man

Thoughts roll not beneath the dust
No feeling is in the cold grave
Neither thought nor feeling can die
They have leaped to other worlds
They are far above the skies

They kindle in the stars,
They dance in the light of suns
Or they live in the comet's white haze

These poor remains of frame
Were the source of the organs of flesh
That feel the control of my will
That are active and mighty in me

They gave to my body form
Is nought in your dying limbs
That gave to my spirit life
The blood that rolled through their veins
Was the germ of my bodily power

Their spirit save me no germ
of kindling energy ...

Here this remarkable poem breaks off. We know that Davy had a great boyhood reputation, as a teller of stories based upon Cornish folk-lore. In later life; Davy's aim was conventional verse of a somewhat stilted nature.

So why did Coleridge state so categorically that Davy might have been the greatest poet of his day? This statement was made at a time when Coleridge was obsessed with the idea of a great philosophical poetical work. To Poole, Wordsworth and Lamb, among others, he himself spoke of writing such a poem, for which he had grandiose schemes,

I should not think of devoting less than 20 years to an Epic Poem. Ten to collect materials and warm my mind with universal science. I would be a tolerable mathematician, I would thoroughly know Mechanics, Hydrostatics, Optics, and Astronomy, Botany, Metallurgy, Fossilism, Chemistry, Geology, Anatomy, Medicine — then the ***mind of man*** *— then the* ***minds of men*** *— in all Travels, Voyages and Histories. So would I spend ten years — the next five to the composition of the poem — and the last five to the correction of it.*

The theme of this epic was to be the fall of Jerusalem. It was never written, though Coleridge, for the great part of his life, was to speak of it as a kind of ongoing work; part of his gigantic, overall philosophical *magnum opus* into which *Jerusalem* was to be slotted, so to speak, some time or other when he had twenty years to spare in which to write it. In the light of what was ultimately to transpire, there can be no doubt that Coleridge did discuss this scheme with Davy. But Davy was too taken up with his own career to contemplate devoting twenty years to a philosophical epic poem. Thus Coleridge's categorical, albeit somewhat over imaginative claim, that Davy would have been the greatest poet of his age, a great philosophical poet, had he not been the greatest chemist.

We have seen that Davy was in fact a poet. But what of the claim that he was a philospher? At that time "philosophy" was a broad term covering the methodical pursuit of almost any branch of knowledge. More exact names for the branches were "methaphysical philosphy", "moral philosophy" and "natural philosophy". Most of what we now call science came under this last heading.

Davy, however, had too broad a spectrum of interests and too wide a vision to be confined within the single category of "natural philosphy"; that is to say, as a scientist. He spilled over into the sphere of "metaphysical philosophy". For that reason Southey, in a lighthearted but perceptive moment, coined for Davy the name, "metapothecary", which delighted Coleridge

Coleridge's obsession with the idea of a great, comprehensive philosophical poem owed its inspiration to the doctrine of systematic thinking.

Davy was to emphasize, especially in his later years, the interrelation between diffent parts of the human mind and the connection between the sciences. His experiments with nitrogen and chlorine, in order to produce an efficient "detonation compound" for Wellington's armies, contributed to the victory at Waterloo; his so-called Davy lamp saved the lives of countless pitworkers. In these triumphant achievements he found justification. For Coleridge, and for Wordsworth, things were very different. Coleridge struggled for the greater part of his life to demonstrate, intellectually, the reconciliation of the Platonist "I Am" and the Aristotalian "It Is"; unless he could show system in his philosophical thinking he could not hope for serious acclaim. As for Wordsworth, encouraged and goaded by Coleridge, he, by producing a poem of systematic philosophical construction and content was to become, in Coleridge's words, "The first and greatest philosophical poet". Or such was Coleridge's scheme on behalf of Wordsworth.

Coleridge first artificially inseminated Wordsworth with the plan, or outline, for a great systematic philosophical poem during the winter of 1797 to '98, when the friendship of the two poets was in its magnificently stimulating and productive

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first flowering. As we have learned, some twelve months later Coleridge was encouraging Davy to attempt the same thing. Davy was undoubtedly flattered at having the project put to him, and he was far from disinterested, but he looked to win his "predestinied Garlands, starry and unwithering" (as Coleridge expressed it) from science and not from poetry.

Wordsworth, however, had his poetic muse and aspirations fervently fired by Coleridge. In 1797 he started work on the philosophical poem. It was to be entitled *The Recluse: or views on Nature, Man and Society*. Into this monolithic work great segments of Wordsworth's blank verse compositions were to be fitted: *The Ruined Cottage, The Discharged Soldier, The Old Cumberland Beggar, Michael, The Brothers, Home at Grasmere, The Tuft of Primroses, The Excursion;* with *The Prelude* initially envisaged as an appendix, then finally as prologue.

By the time Wordsworth published the segment *The Excursion* in 1814 he was visibly running out of steam. Coleridge did not hesitate to make known his disappointment with the poem.

The Excursion was nine thousand words long. *The Recluse,* when completed was to be a three part poem; *The Prelude* in its final version (it did not appear until 1850, after Wordsworth's death, due to its nature of intimate self revelation) came to nearly eight thousand lines; Parts One and Three of *The Recluse* remained to be written and had these parts been of the same length as those sections which were completed the entire poem would have reached about thirty three thousand lines; twenty two thousand five hundred lines longer than *Paradise Lost!*

It can only be seen as a relief to posterity that Wordsworth, after completion of *The Excursion,* ran out of steam. *The Recluse* puffed and sighed to a full stop.

His inability to complete *The Recluse* held profound trauma for Wordsworth. For almost twenty years the poem had been seen by him as his *raison d'etre* as a poet, the justification of his friends' faith in his genius, the summit of his aspirations (to quote Darlington). In 1804 Wordsworth had loudly announced, "To this work I mean to devote the prime of my life and the chief force of my mind."

In that year came Coleridge's departure for Malta; from 1806 to 1810 his hopeless morphine addiction destroyed both himself and his personal relationships, including his marriage, and his friendships with both Davy and Wordsworth.

Davy had heard much of *The Recluse,* or more correctly of the dazzling project of the poem, from Coleridge, and from Wordsworth too on those occasions when Davy visited Dove Cottage in 1804 and 1805 respectively. Following this second visit Dorothy wrote to Lady Beaumont, wife of Wordsworth's patron and friend, Sir George Beaumont, "We are now entirely alone ... and I hope we shall have leisure, and that my brother may begin in good earnest with his important task. Mr. Davy perhaps mentioned to you that he read a part of the *The Recluse* to him."

Although Davy was always a welcome enough guest at Dove Cottage and continued to see Wordsworth occasionally for the rest of his life there was never that closeness between the two men that had prevailed between Coleridge and Davy. In 1831, two years after Davy's death, Wordsworth commented in a letter to Sir John Stoddart, "There were points of sympathy between us, but fewer than you might expect. His scientific pursuits had hurried his mind into a course where I could not follow him; and had diverted it in proportion from objects with which I was best acquainted."

Coleridge and Davy had had ground in common apart from intellectual and poetic spheres; they had had many convivial evenings together, wining, dining, or being lionized in fashionable drawing rooms after Davy had left Bristol for the Royal Institution in London and Coleridge had exchanged seclusion in Keswick for leader writing on the *Morning Post.* Before this, in Bristol, they had both played a prominent part in what is usually referred to as the Bristol drug circle.

Davy, as a chemist, took a professional interest in drugs. Coleridge, even as early as 1799, was an established opium addict.

Davy's demonstrations with nitrous oxide, or "pleasure producing air" as he called it (more popularly known as "laughing gas") were immensely popular in the Beddoes circle as a promotive agent for exhilarating trips, as we would call them today. There were perfectly convincing reasons for these delightful sessions with nitrous oxide; all was done in the name of scientific experimentation, which made it thoroughly respectable. Nonetheless the "air" was indulged in with amazing recklessness by all parties concerned; apparently with no regard for possibly damaging after effects. Those who tried the gas, besides Davy and Beddoes, included Tom Wedgwood, Coleridge, Southey, Gregory Watt, the Barbaulds, Tom Poole, Roget of the *Thesaurus,* James Webbe Tobin, and Joseph Cottle. Many responded to the gas with sensations of thrill and sublimity; others found it left them unmoved. As always with drugs, personal psychology played a large element in individual experience.

Davy, always an avid enthusiast for sensation (meaning experience imparted by and through the senses, not "sensation" in Fleet Street terminology) was at this stage highly romantic in his approach: an entry in his notebook for May 1800 reads, "After eating a supper, drinking two glasses of brandy and water, and sitting for some time on the top of a wall by moonlight reading Condorcet's *Life of Voltaire,* I requested Mr. Dewyer to give me a dose of air". Davy has left us copious notes upon his sensations derived from nitrous oxide. "Thrilling". "I lost all connection with external things; trains of visible images passed rapidly through my mind, and were connected with words in such a manner as to produce perceptions perfectly novel. I existed in a world of newly connected and newly modified ideas." He derived special pleasure from inhaling the gas alone, in darkness and silence, occupied only by ideal existence, as he put it: the delight he felt on these occasions was often "intense and sublime". One May night, in the moonlight, he respired six quarts of freshly prepared nitrous oxide and had pleasurable sensations "so intense and pure as to absorb existence ..."

Two other equally ardent experimentalists of the period were Tom Wedgwood and Coleridge; the first in all probability, the second most certainly drug addicted rather than professionally involved in the observation of drug effects; though both maintained, of course, that their drug activities were inspired solely by a desire to further scientific knowledge. There is documentary evidence of them having sampled Bhang, their day's popular name for cannabis resin, and there

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is every indication that Davy at some time experimented with it too; for when Tom Wedgwood was anxious to try the drug he, significantly, turned to Davy as the first person to whom to apply for some of the stuff. There is also good evidence to suppose that Davy was acquainted with opium. Coleridge, in letters to Davy, made free allusion opium within contexts quite unconnected with medical treatment. A particularly interesting instance occurred when, in describing his new home in the Lake Country, Coleridge wrote excitedly to Davy, "My dear fellow, I would that I could wrap up the view in a pill of opium and send it to you!" This would certainly seem to indicate a shared interest in, and experience of, opium induced visions, or dreams.

Davy was able to experiment with drugs, and to enjoy drink, without ever becoming in any way dependent; *his* addictions in life were travel, and salmon fishing! Coleridge, on the other hand, became a desperate and lifelong morphine victim and, to lesser extent, an alcoholic.

Yet the fact that Davy had experimented with, and had experienced the pleasures of narcotics meant that he was able to share some of Coleridge's pleasurable visionary drug experiences. This Davy and Coleridge had in common, which Wordsworth and Coleridge had not. What Davy was spared sharing was the hell of total morphine reliance; a hell which was reserved for Coleridge.

In the early months of 1804, when Coleridge was on the point of departure for Malta, in an attempt to cure his opium habit removed from the scrutiny of his friends — and enemies — he and Davy entered upon the final, tragic stages of their friendship. Coleridge could no longer do any sustained work; he could however still talk, and his brain teemed with vast projects, vaster even than that which he had wished upon the unhappy Wordsworth, but he could achieve nothing. "Brilliant images of greatness float upon his mind," recorded Davy, "like images of the morning clouds on the waters... He talked in the course of an hour of beginning three works... What talent does he not waste in forming visions, sublime, but unconnected with the real world!"

Coleridge was fully aware of his predicament. In his private notebooks he mocked himself for his dreams of mighty works that were never even started, let alone brought to fruition.

When the hour came for Coleridge to quit London for Portsmouth, there to embark for Malta. Davy wrote him a final and deeply touching letter of appeal,

"Years have passed since we first met; and your presence, and recollections in regard to you, have afforded me continuous sources of enjoyment. Some of the better feelings of my nature have been elevated by your converse; and thoughts which you have nursed have been to me an eternal source of consolation.

"In whatever part of the world you are, you will often live with me, not as as a fleeting idea, but as a recollection possessed of creative energy — as an imagination winged with fire, inspiring and rejoicing.

"You must not live much longer without giving to all men the proof of your power, which those who know you feel in admiration... Do not in any way dissipate your noble nature! Do not give up your birthright!

"May you soon recover your perfect health — the health of strength and happiness! May you soon return to us, confirmed in all the powers essential to the exertion of genius ... I shall expect the time when your spirit, bursting through the clouds of ill health, will appear to all men, not as an uncertain and brilliant flame, but as a fair and permanent light, fixed, though constantly in motion — as a sun which gives its fire, not only to its attendant planets, but which sends beams from all its parts into all worlds.

May blessings attend you, my dear friend! Do not forget me: we live for different ends, and with different habits and persuits; but our feelings with regard to each other have, I believe, never altered. They must continue; they can have no natural death; and, I trust, they can never be destroyed by fortune, chance or accident."

Murmuring a broken reply, Coleridge sailed away. After his return his condition appeared even more hopeless, he quarrelled with everyone, Davy, like Wordsworth, found himself impoverished by the withdrawal of Coleridge's company and friendship, though, unlike Wordswoth, Davy could carry on with a triumphant career without Coleridge's presence.

"We live for different ends," Davy had written. Coleridge devoted the final two decades of his life to three objectives: releasing himself from the bondage of opium; saving his immortal soul, as he expressed it; and retrieving his reputation as a philosopher and man of letters. Davy for his part won increasing fame and married a fortune; he became president of the Royal Society; was made baronet; fished in Europe's best salmon waters, and travelled extensively. But he had inherited a family predisposition for high blood pressure; in 1826 he had a stroke. His right side was affected by paralysis, but his doctors hoped for complete recovery. As soon as he was able to travel he made a tour of Italy, accompanied by his brother, returning to England through Austria. From Salzburg, on July 1, he wrote resigning his Presidency of the Royal Society. He returned to London in the early autumn and went to stay with his old friend Thomas Poole. In the tranquillity of Nether Stowey, Davy began a book which he completed within the next two years, *Salmonia, or Days of Fly Fishing: a series of Conversations on the Art of Fly Fishing*. The book was well reviewed and went into several editions. Nonetheless, much as Davy delighted in Izaak Walton, he could not achieve a second *Compleat Angler*.

On March 29, 1828, Davy left England to make yet another continental tour. He was accompanied this time by his godson, John Tobin. They travelled through France and Belgium to the Rhine and from there to the Danube. From the following November to March of 1829 Davy was in Rome. He knew that he was fatally ill and losing strength; he consoled himself with the writing of another book, *Consolation in Travel; or the Last Days of a Philosopher*. But when we come to read it we discover that its title might equally well have been, *Consolation and Comforts from the exercise and right application of the Reason, the Imagination, and the moral Feelings, addressed especially to those in Sickness, adversity or Distress of Mind.*

Davy was sick. He required help. He turned instinctively to his memories of Coleridge. "Thoughts which you have nursed have been to me an eternal source of consolation ..."

In the steps of his old friend and mentor Davy produced six

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dialogues in which he examined the divinity and eternal in man. The work was dedicated to Thomas Poole and appeared posthumously early in 1830.

The five characters whose conversations formed the dialogues were named Ambrosio, Onuphrio, Eubathes, the Unknown, and Philalethes. The dialogues were entitled respectively, "The Vision", "Discussions connected with the Vision", "The Unknown", "The Proteus, or Immortality", "The Chemical Philosopher", and "Pola, or Time". Davy had planned to write a seventh dialogue on the doctrine of Definite Proportions and an eighth and final dialogue on the Chemical Elements. Fragments of these two last appear in his collected works; they were never completed, Davy dying while still at work upon them.

Though not written in verse, *Consolations in Travel* is a poet's work; a lengthy prose poem. This prose poetry in which it is written carries distant echoes of his boyhood's bardic poetry; it is also deeply influenced by Coleridge; we hear his voice ringing out from the pages.

The first dialogue described a vision that Philalethes has by moonlight alone in the Coloseum.

The second dialogue is a discussion arising from the vision and develops into an examination of religions and religious faith. In the third dialogue the travellers meet with the Unknown, who holds forth in almost Coleridgean style upon physical phenomena, geological schools, the book of Genesis and the origin of species. The conversation then returns to the vision in the Coloseum and from thence to dreams, apparitions and ghost stories, and to superstition, both secular and religious.

The Fourth, Fifth and Sixth dialogues are increasingly the thinking of a man of scientific approach, rather than that of a poet and visionary. Yet it is the first, visionary dialogue, that possesses the greatest impact; though the entire work, its concept and the way in which it is worked through, reveals that Davy, whether consciously or unconsciously, was loosely following the outline laid down, some thirty years earlier, by Coleridge when he was discussing his project of the great systematic philosophical poem.

In reading the vision and dream material one is forced to the conclusion that Davy was here describing actual visions, or dreams, that were experienced while under drug influence. They are so vividly described that Davy must either have experienced them himself, or have had them described to him by someone possessed of marvellous powers of speech; in short, Coleridge. Or perhaps some are Davy's visions, while others are those of Coleridge? In either case, the resultant writing is most remarkable, and is even more so when we pause to consider that it comes from the pen of a man who is famous as a scientific genius; not as some wildly imaginative creative writer, a Thomas Lovell Beddoes, a Hans Andersen or an Edgar Allan Poe; though *Consolations in Travel* place Davy almost in these ranks. Many moments from *Consolations in Travel* linger in the mind; among them is the Arab, or was he Arab? that the Unknown dreamt of: "a very old man, with a beard white as snow; his countenance was dark, but paler than that of an Arab, and his features stern, wild, and with a peculiar savage expression; his form was gigantic, but his arms were withered, and there was a large scar on the left side of his face, which seemed to have deprived him of an eye... there was a chain round his waist, which clanked as he moved. It occurred to me that he was one of the santons, or sacred madmen, so common in the East". And we think that we recognise this figure as that of the Arab, bearing a stone and a shell, emblems of knowledge and harmony, riding across "the illimitable waste,

> With the fleet waters of a drowning world
> In chase of him."

This Wordsworth wrote in Book Five of *The Prelude;* yet the Arab, the stone and the shell and the pursuing waters were given Wordsworth by Coleridge, and Coleridge found them in an opium dream. Did he tell Davy of this Arab too, in the days when Coleridge was envisaging Davy as the "greatest philosophical poet"? Or is this bearded, wild old man of Davy's "Unknown" someone else altogether? This old man describes how he renounced the worship of the one supreme God for the superstitions of the pagans and ever since has spent his life in constant and severe penance. "I have lived through fifteen tedious centuries, but I trust in the mercies of Omnipotence, and I hope my atonement is completed... My time is arrived, I come!' As he spoke these last words, he rushed towards the sea, threw himself from the rock and disappeared."

The last of the Ancient Mariner? These haunting visions flash before us as we read. And how much of it all is Davy, and how much Coleridge we shall never know. Perhaps Davy did not know either.

> I pass, like night, from land to land;
> I have strange power of speech;
> The moment that his face I see,
> I know the man that must hear me:
> To him my tale I teach ...

Coleridge had known Davy's face. And Davy never forgot the tale.

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WILLIAM COOKWORTHY, AN 18TH CENTURY POLYMATH

BY A. Douglas Selleck*

William Cookworthy of Plymouth, chemist and scientist, inventor and philosopher, literary man and devout Quaker elder is an excellent example of the 18th century polymath.

As a mineralogist his reputation extended beyond the U.K. at one time or another, no less than six Fellows of the Royal Society visited this man, who discovered china-clay in Cornwall and produced the first true English "hard paste" porcelain. An able linguist, Cookworthy first translated from the Latin the works of Swedenborg and became a convinced believer in his philosphy while continuing as an active Quaker minister.

For Plymouth the 18th century was a golden age, not in the warlike Elizabethan sense, but in the fields of art, science and invention. In and around the town could be found artists of the calibre of Reynolds, Northcote, and Opie. The remarkable Mudge brothers were medical pioneers and inventors of scientific instruments, they with Dr. Huxham an expert on diphtheria, smallpox and aother epidemic diseases, were friends and neigbours of Cookworthy, Dr. John Wolcot (alias Peter Pindar, the poet and satirist), was frequently a quest at his home in Notte Street, as were many more famous people. So interesting was his conversation, so tolerant and attractive his personality, that though a plain and consistent Quaker, he was often the guest of the aristocracy and a friend and adviser of such notables as Jervis and Captain Cook.

His personal life had its tragedies, but to his great humanity was added a self-deprecating and occasionally impish humour. His practical kindliness inspired in his fellow citizens as much affection as respect. So much so, that on the day of his funeral in October 1780 all shops in the town closed and so great a crowd thronged the route that the cortége had difficulty in getting to the Quaker Meeting House for the funeral service.

His death was noted widely, Felix Farley's Bristol Journal commented: "Last Tuesday Morning, died Mr. William Cookworthy, an eminent Minister of the people called Quakers and one of the greatest Chemists this nation ever produced." It is noteworthy that it was for his skill as a chemist that this contemporary writer praised him, not for the porcelain he produced which is his main claim to present fame.

Cookworthy was born at Kingsbridge, some thirty miles from Plymouth. He was the son of a weaver, who died before William had reached fourteen, leaving his mother with him and six other children to provide for. Within a couple of years the family was impoverished, tradition has it, as a consequence of the father's unwise part in the South Sea Bubble speculation.

The Quaker community saw that the family was provided with the necessities of life and Silvanus Bevan the Quaker proprietor of a London firm of wholesale chemists offered the obviously bright William the chance of learning his trade in the capital. To save the expense of the coach fare falling on his family, he walked the two hundred miles to London, carrying his few possessions.

In six years in London Cookworthy became a skilled mineralogical and pharmaceutical chemist, and, by voracious reading and self-education, he gained a knowledge of classical literature, and such a standard in Greek, Latin, and French, as later to become a competent translator.

Silvanus Bevan had left Swansea to found, in 1715, "Allen & Hanburys". There was at that time no clear differentiation between the chemist in the wider industrial sense and the druggist, and the firm was as occupied with the assay of mineral ores as the preparation of medicines.

Cookworthy's capability and personal integrity was recognised when the Bevan brothers took him into partnership and set up the firm of "Bevans and Cookworthy" in Plymouth in 1726, putting him in sole charge at the age of 21. It was a shrewd move, Plymouth, an important naval port, and the first port of call for transatlantic shipping, provided a good potential market for medical supplies, there was too the close proximity to the tin and copper mines of Cornwall and Devon as well as the mushrooming growth of the suburb of 'Dock' (later Devonport).

The business grew and it eventually passed entirely into Cookworthy's hands. It had both a retail side, supplying individual doctors, or members of the public in the town, and a much larger wholesale sector supplying customers throughout the south-west peninsula. Cookworthy made regular rounds on horseback throughout the countryside, during which his brother Joseph looked after the Plymouth manufacturing establishment. On the journeys Cookworthy combined business with his duties as an elder of the Society of Friends. In fact many of his customers, such as Dr. Hingston of Penryn and Dr. Dicker of Exeter were also Quakers.

As he rode around, Cookworthy kept an eye open for useful minerals, and for sources of the vegetable and animal materials, which made up the bulk of his medicines.

We do not have to guess at the preparations that Cookworthy sold. In 1745, he wrote to a friend, "I have at least hearkened to they advice & begun to commit to black and white what I know in chemistry...". An important MS., now in Plymouth City archives, is his chemical notebook. It contains some 180 formulae, written in abbreviated pharmaceutical Latin, as well as explanations in English of other chemical and mineralogical experiments.

The herbal and vegetable constituents were usually made up in tinctures and cordials and the vehicle was most often "Spt. Vin. Rect." i.e. rectified spirits of wine; they are:-Absinth (wormwood), aloes, angelica, cardamine (bitter cress), centaury (yellow wort), cinammon, coriander, cubeb (pepper), elder, fennel, gentian, jallap (a purgative, a dose of jollop in popular speech), juniper, laurel, lavender, mace, mellilot (clover), mint, moschatel, myrrh, olive oil, opium, paeony, poplar, rosemary, saffron, tobacco, turpentine, and valerian.

Animal constituents included cantharides, lard, mutton fat, and bees wax.

*Author of "COOKWORTHY — a man of no common clay." Published by Baron Jay, Plymouth, 1978. ISBN 0 904593 05 3.

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Here are a couple of examples:

Paeony Water

Paeony flowers	2 lbs. 8 ozs
Paeony roots	1lb. 8 ozs.
Mace	2 ozs.
Cinnamon	13 ozs.
Rosemary oil	15ozs
Lavender	1½ ozs.

* Rectified Spirits of Wine

Tobacco Ointment

Popular Leaves	24 lbs.
Clover Leaves	15 lbs.
Lard	64 lbs.

Tobacco finely powdered, ½ oz. to every lb. of above.

His Quaker principles did not prevent Cookworthy from being the Navy's main source of medical supplies in Plymouth, as the preservation of life was what was involved. A Mrs. Dubois had invented "portable soup". This protein rich preparation for nourishing sick sailors looked like slabs of glue. All offal from oxen killed for the Navy was used for this purpose and Cookworthy had the contract for its manufacture. Captain James Cook reported favourably on its use on the completion of the Endeavour expedition. Even after William Cookworthy's death, his old friend, the great Admiral John Jervis, remembered the firm and sent an urgent dispatch from the Mediterranean for medical supplies from "Mr. Cookworthy of Plymouth, Druggist".

Cookworthy, whose brother had been a mate on an East-Indiaman, was much concerned with the death of sailors from thirst when water supplies ran out. He urged that stills be set up on ships to produce drinkable water from sea water and did many experiments on this at his own expense.

Another achievement was to be the first English chemist to manufacture the colour cobalt blue, direct from the ore. His mineralogical expertise was sought overseas and his notebooks contains a copy of a letter he wrote to the Governor of North Carolina on the assaying of cobalt ore. His reputation in this 20th century, the Manchester papers reported, in June 1908, that the "Cookworthy Collection of fossils and minerals," had been presented to the Grammar School. It has however not been heared of since 1931, when the school moved its location.

Cookworthy also had a reputation for his skill in tracing metallic lodes with the "divining rod" and he left very full instructions on its use. At St. Austell in Cornwall he demonstrated this power to some curious gentlemen, and it was reported: "The lode was traced just as the miners informed the gentlemen it ran; and the lode appearing by the rod at a certain place to be squeezed to nothing, the miners declared this also to be true, for at this very spot...they lost it." When Dr. Johnson visited Devon, on the invitation of his friend Joshua Reynolds in 1762, Cookworthy was invited to demonstrate his skill. Johnson suggested that a trick might be played on Cookworthy by burying an iron crock in the garden. When Cookworthy indicated the spot the gardener was ordered to dig. "When the iron crock made its appearance, to the great amusement of Dr. Johnson... Mr. Cookworthy was very angry ...declaring at the same time that the result, though intended to throw ridicule on him, had really proved the efficacy of his divining rod."

When Cookworthy died, his nephew of the same name ran the business until his favourite grandson Francis Fox was old enough to take charge. Francis Fox died in 1812 and his Quaker partner, Benjamin Balkwill, took over. In 1973 the firm was still in business in Plymouth, with the proud sign 'Founded by William Cookworthy, 1726' above the door. But the last proprietor, Mr. E.C. Burrow, a staunch supporter of the Cookworthy tradition, retired and the shop finally closed on January 31 1974.

China clay is the most important industry in South West England and contributes substantially to the country's export trade. This most useful raw material, was first discovered and identified by the Quaker chemist from Plymouth, who then made from it the first true English porcelain.

At the beginning of the 18th century, procelain manufacture in Europe was an oriental mystery, which only Bottger of Meissen had solved by 1709. No one in England could imitate the ware brought at such expense from China. Though beautiful china came to be produced at Bow, Chelsea, Derby, Liverpool, and Worcester, it was of "soft paste", lacking the transparency and hardness of true porcelain.

A French Jesuit, Père D'Entrecolles, had, in 1712 and 1722, sent two letters from China giving a detailed description of porcelain manufacture. These, published in 1736, were read by Cookworthy in the original French. Many experimenters began to try to produce hard paste porcelain from which they hoped a fortune could be made. Only Cookworthy, after a lifetime of painstaking effort succeeded, and he certainly gained no financial advantage from it.

Cookworthy, though not a potter, had, as a result of his mineralogical work considerable knowledge of the physical and chemical changes which take place when substances are brought to very high temperatures and this was the key to his success. "Soft paste" porcelain was manufactured by having two distinct firings, first of the raw clay, at a comparatively high temperature, to turn it into "biscuit". This "biscuit" was then coated with a glazing mixture of materials which would melt at a much lower temperature, at a second firing. The glaze produced a glossy surface, sealed the many pores in the biscuit and covered any imperfections. This produced a finished were no more translucent than the original biscuit, while the glaze itself often caused problems by running or crazing.

The Chinese process, reproduced by Cookworthy, when after many experiments he had discovered the exact proportions of materials and the critical temperature, was different. The glaze was chemically similar to the "body" of the ware, consisting of finely powdered china-stone, with an admixture of fern ashes and lime as a flux. The "body" also contained powdered china-stone mixed with the china-clay. There was no biscuit stage, but a single firing at a temperature very much higher than that in a normal potter's kiln. This vitrified the silica content of the china-stone, in glaze and body simultaneously, filling every pore in the ware and producing a fine glossy surface, with the degree of hardness and transparency of true porcelain.

It is possible that Cookworthy had started experimenting with china-clay very soon after reading the French Jesuit's account. The source of raw material was far away in

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America, and he was visited by an American, who evidently thought he might be interested in buying china-clay, in 1745. He wrote to a friend:— "I had lately with me the person who has discovered the China Earth. He had with him several samples of the china-ware, which I think were equal to the Asiatic." Cookworthy's letter continues:— "It was found in the back of Virginia ...where he discovered both the petuntse (china-stone) and the kaolin, (china-clay) but it is this latter earth which he says is essential to the success of the manufacture. He is gone for a cargo of it having bought from the Indians the whole country where it rises. They can import if for £13 per ton and by that means afford their china as cheap as common stone ware..."

The American traveller's forecast was extremely optimistic, cheap china of any sort was not to be produced until half a century had gone by. As to his hopes of exporting china clay to England, although neither of them knew it at the time, Cookworthy was soon to put an end to that prospect. On one of his business rides through Cornwall he found the China-stone, some of which had apparently been taken by sea to Plymouth to help build the walls of the Citadel on the Hoe, and thus had been, if not under Cookworthy's nose, just a quarter of a mile from his front door. The china-clay was first brought to his notice, family tradition says, by his Cornish friend and fellow Quaker John Nancarrow, who used it to repair the furnaces of the Newcomen engines which pumped water from the mines. Cookworthy recognised it for the kaolin mentioned in the letters sent from China by D'Entrecolles.

Cookworthy left a detailed account in his own hand of his discovery and the difficulties involved in the twenty years of experimentation which preceded the setting up of the Plymouth factory in 1768. He insisted that the only suitable fuel for the furnaces was wood, and indeed coal was never used successfully to produce true procelain in England.

By fortunate circumstance Cookworthy came upon china-clay deposits on the land of Thomas Pitt, a nephew of Lord Chatham and it was in partnership with him that he set up the Plymouth factory. No doubt too, his influence was useful in obtaining the patent, dated Feb 29, 1768, *"containing Our Grant unto him the said William Cookworthy... of the sole making and vending his said Invention... for the term of fourteen years,".*

The earliest known piece of pottery is a mug, now in the British Museum, with the date 'March 14 1768' inscribed on its base. It is rather crudely decorated and not quite perfect in other respects, but many beautifully decorated and enamelled pieces were to follow as the technicians gained experience, and expert decorators, some from France, were recruited. It was part of Cookworthy's genius that he was able to spot talent early, two local lads he employed became famous ceramic artists. One was William Stephens of Truro, and the other was Henry Bone, also from that city, who became an enameller and miniaturist patronised by Royalty and was elected to the Royal Academy.

Some of the moulds, used at Plymouth and later at Bristol had formerly been used at other potteries to make "soft paste" porcelain, and in Plymouth museum, there are contrasting examples from the same mould both beautifully decorated, but demonstrating to the superiority of the true Cookworthy porcelain.

The Plymouth factory was only in existence for a couple of years. The great expense of fuel and the too high proportion of spoiled ware, made it uneconomic and Thomas Pitt no longer wanted to back it with his money. Th business was sold to a consortium of Quaker businessmen in Bristol, headed by Cookworthy's friend the young Richard Champion, a political friend of Thomas Burke, for whom indeed a special tea-set was made. Champion ran up against the same difficulties, he had to bring wood to Bristol from as far away as Savernake Forest in Wiltshire. In addition, the Act of Parliament which he promulgated, with Burke's assistance, to prolong the patent was fiercely opposed by Wedgwood and his influential friends in the House of Lords, involving much extra expense. Wedgwood had earlier clandestinely visited Champion's Bristol works and attempted to recruit some of his workmen. What Wedgwood really wanted was the detail of the glazing process and this he was able to get, for the result of the struggle in the House of Lords was that while Champion was granted an extension of the right to the sole and exclusive application of Cornish clay and stone for the manufacture of *transparent* ware, a vital provision allowed potters in general the free use of the stone in "the opaceous glazes of the clay in opaque pottery."

Thus when, in 1788, Champion was bankrupted and left the industry and the production of Cookworthy type hard paste porcelain ceased, Wedgwood bought up his stocks of clay and stone, and ensured that more would be forth-coming from Cornwall. He and other Staffordshire potters mixed the kaolin and china-stone with approximately fifty per cent of the calcined bone, to make the hybrid porcelain known as English bone china. This can be produced at lower temperatures and with coal as fuel. It was a really economic proposition and has ever since been the standard product, reaping for others the profts which had eluded Cookworthy and his partners.

It is ironical that today even the most utilitarian specimens of Cookworthy procelain such as cider mugs, fetch high prices and the intricate decorated pieces, with their beautiful enamelled colours, are extremely valuable. The best collections available for public viewing are at Plymouth City Museum and the Victoria and Albert Museum.

It is fair to say that if Cookworthy had no other claim to fame his founding of a major industry in Cornwall and his patient unravelling of the secret of porcelain manufacture would suffice, but to have achieved this in a life so full of other activities and concerns, is the mark of a man of genius.

"A philosopher without pride, a Christian without bigotry", these words from an obituary are an apt characterisation of Cookworthy, and an indication that by many of his contemporaries, he was no less esteemed as a scholar and thinker than as an eminent chemist and inventor. Despite his wide interests and the many skills he acquired, the basic component of his personality was one he inherited, the fact that he was born and bred a Quaker.

Cookworthy's attitude to everyday life is summarised in his advice to a young relative:— "...watch against the spirit of the world as a man of business; for without great care, ability and success, with the honour which the world

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plentifully pours (in appearance at least) on the able and the successful, are ideas that are too apt to seduce from humility and simplicity of heart. Regard business as it stands in the Divine order: the means of exercising honesty and beneficence, and the making a comfortable and decent provision for thy family."

Cookworthy had, in 1735, at the age of thirty, married Sarah Berry of Taunton, like himself, a devout Quaker. When ten years later she died of a stroke, his grief led to a nervous breakdown, from which he only slowly recovered. He clung all the rest of his life to the belief that ultimately they would be re-united. His belief in the survival of personality beyond the grave was strong. To a bereaved relative he wrote:- "But are all these dear souls lost? I trust not for I cannot bear the thought: let me but labour to know him who is the resurrection and the life ... and I have no doubt but that I shall rejoin them, and never be separated from them more;"

This letter was written not long before he first came upon the works of Swedenborg, which purport to describe in great detail personal survival and life beyond the grave. He was much impressed and translated them from the original Latin. *"The Doctrine of Life"*, which Cookworthy published his own expense in Plymouth in 1763, was the first of Swedenborg's works to appear in English. For this Cookworthy was much criticised by, among others, John Wesley, who regarded Swedenborg's revelations as dangerous heresy.

Whatever his theological position, of Cookworthy's practical Christianity there can be no doubt. As his mother's before him, his name was a byword for charity in Plymouth. Not that he was to be imposed upon. He wrote to a friend whose brother was threatened with prison for drinking debts:— "At the same time, as I thought no man irreclaimable, I should be willing to assist him in getting into an orderly way of life, to the utmost of my power; but if he attempted to put any tricks on me, I should have done with him at once. I gave him a dinner which I believe the poor creature wanted."

Any idea of Cookworthy as a perpetually solemn, or censorious person is dispelled when one considers the people who were his close friends. Perhaps the most surprising was Dr. John Wolcot, otherwise known by his pen name as a satirical poet "Peter Pindar". Thirty years Cookworthy's junior he had been among other things a proficient painter, and for a brief hilarious episode a minister of the Church of England in Jamaica. It was he who brought to the aged Cookworthy's home the young painter he had discovered in Cornwall, John Opie, a working class lad that Wolcot hoped would be another Reynolds (particularly in regard to his money earning potential). His portrait of Cookworthy, one of his early efforts, is the only one available, and hangs in Plymouth City Museum. Opie went on to become a popular portrait painter and an R.A. Wolcot, who called Cookworthy by the affectionate nickname "Will Swedenborg", used to regale the Cookworthy family with his readings from Shakespeare, particularly those concerning Cookworthy's favourite character Falstaff, with resulting gales of laughter. It was probably from Cookworthy that Wolcot got the story of "The Plymouth Carpenter and the Coffins", his poem which told of the cousin of the mayor who got a contract for burying French prisoners of war, and hit on the profitable idea of decapitating the corpses to get them into smaller coffins.

For lo this man of economic sort
Made all his coffins much to short,
Yet snugly, he accommodates the dead
Cuts off, with much ***sang froid,*** *the head,*
And then to keep it safe as well as warm
He gravely puts it underneath the arm...

This would be the kind of scandal which Cookworthy, who was much concerned for the wretched prisoners, would wish to expose.

Another incongruous friend was Captain John Jervis later to become the redoubtable Admiral. He had been introduced to the septuagenarian Cookworthy as the only other dinner guest at the table of Lord Mount Edgcumbe, for whom Cookworthy had made some pieces of porcelain. The after-dinner conversation lasted far into the night, and the pacifist Quaker and the Naval captain became fast friends.

Whenever Captain James Cook landed at Plymouth he visited Cookworthy, and he dined at his home in Notte Street with Sir Joseph Banks and other members of the Endeavour expedition on the eve of sailing. The official object of the expedition was to observe the passage of the planet Venus across the sun's disc, from a vantage point in Tahiti. Cookworthy's great niece recalled hearing a conversation about it between him and her mother. When she asked some questions, the old gentlemean broke off his conversation, and, borrowing a pin-cushion and thimble as visual aids, demonstrated for the little girl the planets passage across the sun's path. It was probably from another of Cookworthy's friends, Dr. John Huxham, that Cook got the information that fresh vegetables or fruit juice would prevent scurvy.

Another younger man who benefited from Cookworthy's friendship and instruction was the engineer John Smeaton who lodged with Cookworthy while building the Eddystone Lighthouse. Cookworthy gave him chemical and mineralogicial advice which Smeaton acknowledges in his account of the construction.

Cookworthy was very much a family man, a kind, even indulgent father to his five daughters. The oldest had only been nine years old when their mother died and Cookworthy's mother came to Plymouth to help bring them up. Tragedy had not finished with the family, two years after, smallpox struck, the four year old twins were affected, one died and for three months the survivor, Susanna, was blind. Seven year old Mary, lifting her little blind sister into bed, suffered a back injury which deformed her for life, she had unsuspectedly suffered from brittle bones. This did not prevent the spirited child from later riding around the Hoe on a half wild donkey. In the course of her life she broke both arms and legs, and remarked jocularly, that she had only her neck left to be broken.

Cookworthy was passionately fond of fishing and had a country cottage near the river Erme. Once while fishing there, his daughters signalled from the cottage that dinner was ready. The fish were biting well, and he remarked to his little grandson, "Don't see them Franky, let us stop a little longer, we can't leave the fish, while they're rising so fast."

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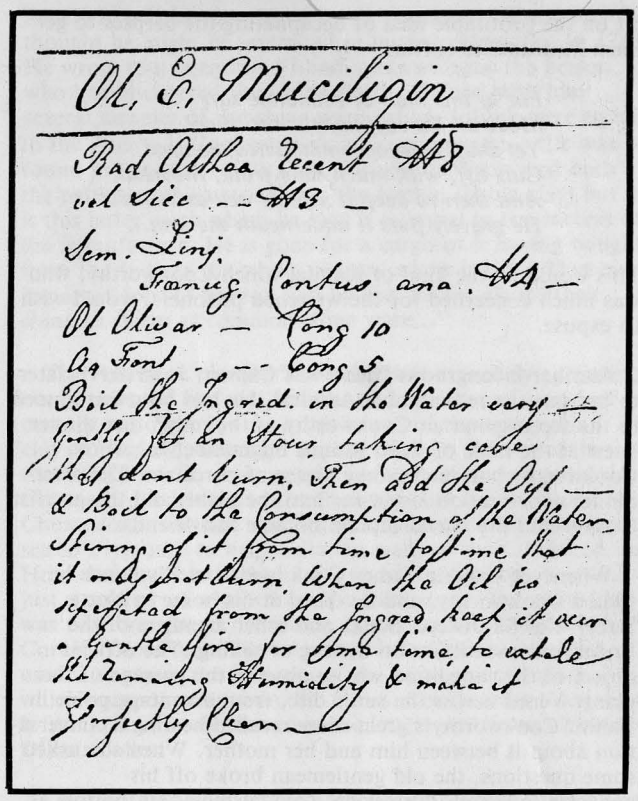
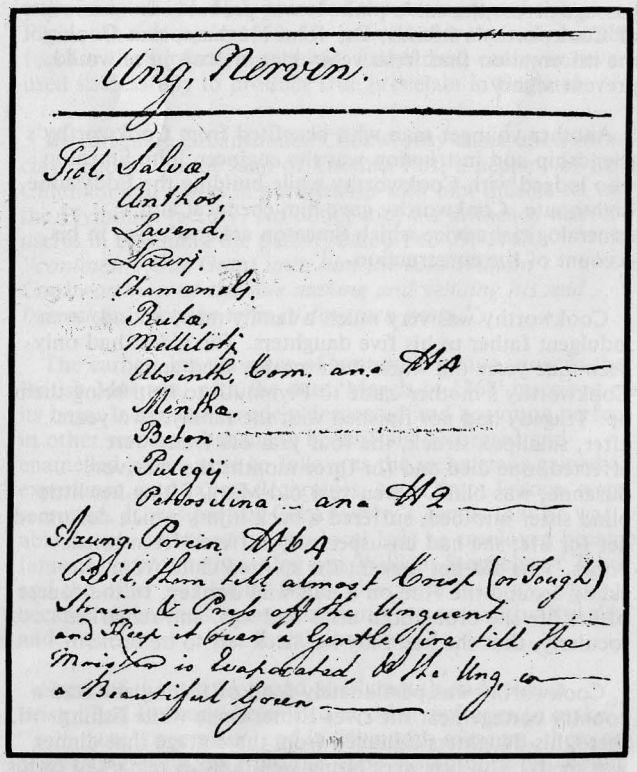


Ol. C. Muciligin

Rad Althea Recent ℔ß
vel Sice — ℥ß —
Sem. Lini,
Fænug. Contus. ana ℥ß —
Ol Olivar — Cong 10
Aq Font — — — Cong 5
Boil the Ingred. in the Water very gently for an Hour taking care they dont burn, Then add the Oyl — & Boil to the Consumption of the Water Stirring of it from time to time that it only may burn. When the Oil is seperated from the Ingred. keep it over a Gentle fire for some time, to exhale the remaining Humidity & make it Perfectly Clear —



Ung, Nervin.

Fol. Salvæ
Anthos,
Lavend.
Saturj. —
Chamomel.
Rutæ,
Melilot.
Absinth. Com. ana ℥ß ——
Menthæ.
Beton
Pulegij
Pettrosilina — ana ℥ß ——
Axung. Porcin. ℔ß
Boil them till almost Crisp (or Tough)
Strain & Press off the Unguent
and Keep it over a Gentle fire till the
Moisture is Evaporated, & the Ung. is
a Beautiful Green ——

Many stories are told of his absent-mindedness. He was known, while discussing the qualities of genuine procelain, to have taken up a piece of his host's china and broken it to show the texture. On another occasion when dining with Jervis, at a nephew's house, in the full tide of conversation, and becoming dry and talking, he reached across the table, and taking Captain Jervis's glass, drained it of its contents. "Uncle!" said his host, "dost thou know—". "Hush!" interrupted the captain, in an undertone, shaking his fist, "say a word if you dare." and Cookworthy unconscious of what had passed went on with his conversation.

Of Cookworthy's personal appearance, not a lot has been written, although we do have a few sketches and of course the Opie portrait. The sketch showing him "Reading Swedenborg" suggests that he was perhaps somewhat short-sighted, which could account for some of the lapses attributed to absence of mind. There is another hint of this in his grandson's description of one of his mannerisms. His family, he said, when with him at the Quaker Meeting (where of course all sat in contemplative silence, until an individual was moved to speak) always knew when he was going to preach. He would begin, he said, "by screwing his eyes about, for several minutes, then he would lay his staff on the seat beside him, and presently.... he would rise to speak." There is an eye witness description from an old gentleman who knew him; "A tall venerable man, with a three cornered hat and bush, curly wig, a mild but intellectual countenance, and full of conversation."

As the Opie portrait shows, Cookworthy, in the spring of 1780, looked an old and tired man. He became ill and very depressed, a niece referred to the "exceeding distress and gloominess of his mind, so that all comfort, for a season, seemed to be withdrawn. But afterwards, he felt this very painful dispensation to be removed, and enjoyed the rich return of abundant satisfaction." He made a partial recovery, but was only at ease with the family, and "did not regain his relish for general society." The end came in October.

Cookworthy was buried in the small cemetery behind the Quaker meeting house, and his bones were undisturbed, until the rebuilding of Plymouth after the Second World War. In 1956, the cemetery was re-developed, and the Cookworthy remains were re-interred, at Efford on the northern outskirts of the city. Plymothians did not like the idea of his bones going into a common grave and a fund was started to meet the expense of a separate burial. This far exceeded what was needed, and the surplus was given to provide two annual prizes, one for the Department of Ceramics at Plymouth College of Art, and another for the Department of Pharmacy at Plymouth Technical College. These, with the remarkable stained glass window in the re-built Guildhall, depicting him in his pottery, the beautiful collection of china in the city museum, and a street and park named after him are Plymouth's memorials to a most worthy citizen.

Left: Items from Cookworthy's chemical notebook.

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